

**Proposed Privatization Strategy
Policy Framework for the Romanian
Power Generation Sector
Appendices**
Prepared for:

US Agency for International Development

By:



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FINAL REPORT

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APPENDIX A

Indicative Generation Asset Bundles

This appendix presents four dramatically different indicative generation asset bundles designed to appeal to the broadest number of qualified and interested strategic investors. It should be cautioned that these are preliminary results and suggestions only, and have not yet been accompanied either by site visits or else been subjected to even the most cursory of due diligence reviews in the field. In practice, however, appropriate officials and technocrats in the Government of Romania will be responsible for making the final selection and determination of generation asset mix and specific unit composition for each of these asset bundles after careful review and evaluation of the modernization and upgrade requirements of these generation assets, particularly those of Termoelectrica.

1. Introduction to Four Diversified Generation Asset Bundles

In an attempt to attract the maximum number of potential qualified investors with the broadest generation-type and fuel source interests over the full course of this extended privatization period, the Hunton & Williams team recommends that these four bundles be differentiated ideally as follows:

One bundle should be anchored with a major coal-fired power station that is in fairly decent operating condition with the balance of available capacity being made up of hydro units

- Another package should be anchored with a major hydro cascade complex with the balance of available capacity comprised of coal or oil-fired capacity requiring major environmental retrofits to meet EU emission standards
- A third should consist primarily of oil and gas-fired units with the balance in hydro capacity
- And a fourth should be comprised of a mix of various thermal fuel sources along with the remainder of hydro units designated for privatization.

2. Selection Criteria Used in Developing Indicative Bundles

With respect to the selection criteria utilized in developing each of these indicative generation asset bundles, the Hunton & Williams team was guided by the following principles and general guidelines, whenever possible, in assigning specific thermal units and hydro cascades to these four bundles:

- Four separate mixed bundles with a target of between 2,200 and 2,300 MW of available capacity each
- Each bundle should strive to have between 5,000 and 6,000 GWh of electricity production capability per annum to be attractive to potential investors

- Each bundle will also have considerably more thermal capacity than hydro, except for the bundle anchored by a major hydro cascade
- In addition, regarding thermal units assigned to each bundle, all packages should have at least one major CHP plant in its mix of units if at all possible and practical
- Plants and hydro branches should be transferred to a given asset bundle free of burdensome debts (eg - meaning that Deva (Mintia TPP), Bucharest South (Buchuresti Sud CHP), and Braila TPP will remain with Termoelectrica for the foreseeable future or until such time as their international debts have been repaid)
- The Bistrita Cascade will remain with Hidroelectrica due to potential liabilities associated with the first dam in the cascade
- In any case, both the Cernavoda nuclear generating station and Iron Gates I and II on the Danube will also remain under State patrimony and ownership as strategic assets of the nation
- Optimally, units should not be older than 30 years of age unless they have recently been modernized, since one of ANRE's stipulations is that Government should agree to retire approximately 4,000 MW of older capacity as part of this overall privatization structure
- And finally, it would be helpful if each bundle contains geographically diverse units, although this does not have to be an ironclad rule for creating four equally attractive bundles.

3. Romanian Generating Capacity Available for Privatization

A summary of Romanian generating capacity currently available for privatization is presented in Table A-1 below.

Table A-1: Overview of Romanian Generating Capacity Available for Privatization

Plant Type	Current Available Capacity	Strategic or Transferred Asset	Potential Capacity Subject to Privatization
Large Thermal Plants	8,238 MW		8,238 MW
Smaller CHPs	1,688 MW	1,688 MW	-
Hydro Cascades	5,905 MW	1,335 MW	4,570 MW
NuclearElectrica	700 MW	700 MW	-
Total	16,531 MW	3,723 MW	12,808 MW

4. Inventory of Available Termoelectrica Plants on an Asset Transfer Basis

A summary of specific plants that are either available for privatization, will remain under Termoelectrica, or else will be retired over the next five years are presented in Table A-2

below. These units include both thermal power plants and major combined heat and power plants that were not considered for devolution to the municipalities. For the purposes of allocation to the various indicative bundles, only available capacity was considered, as opposed to installed capacity.

Table A-2: Summary of Current Thermoelectric Generation Facilities

Plant #	Plant Name	Fuel	Installed Capacity	Available Capacity		Electricity Production Delivered in 2001	
			MW	MW	%	GWh	%
1	Borzesti Cd TPP	Gas	420	420	5.10	469.836	1.87
2	Braila TPP	Oil & Gas	960	420	5.10	1,046.033	4.16
3	Brazi CHP	Oil & Gas	710	310	3.76	519.119	2.07
4	Bucuresti Sud CHP	Oil & Gas	550	450	5.46	1,043.000	4.15
5	Bucuresti Vest CHP	Oil & Gas	250	250	3.03	794.619	3.16
6	Grozavesti CHP	Oil & Gas	100	100	1.21	291.812	1.16
7	Bucuresti "Progresul" CHP	Oil & Gas	200	200	2.43	506.351	2.02
8	Bucuresti "Titan" CHP	Oil & Gas	8	8	0.10	14.070	0.06
9	Constanta – Palas CHP	Oil & Gas	250	100	1.21	353.696	1.41
10	Craiova CHP	Coal & Oil	300	300	3.64	1,028.144	4.09
11	Mintia TPP	Coal & Gas	1,260	1,050	12.75	4,068.274	16.19
12	Doicesti TPP	Coal & Oil	400	400	4.86	536.218	2.13
13	Galati CHP	Oil & Gas	535	375	4.55	1,048.214	4.17
14	Isalnita TPP	Coal & Oil	630	315	3.82	1,377.954	5.48
15	Iernut TPP	Gas	800	800	9.71	2493.624	9.92
16	Paroseni CHP	Coal & Gas	300	100	1.21	175.676	0.70
17	Rovinari TPP	Coal & Oil	1,320	1,320	16.02	4,614.366	18.37
18	Turceni TPP	Coal & Oil	2,310	1,320	16.02	4,744.051	18.88
	Total		11,303	8,238	100	25,125.057	100

5. Inventory of Available Hidroelectrica Cascades on a Lease or Concession Basis

Similarly, a summary of specific hydroelectric cascades that are either available for privatization or will remain under Hidroelectrica are presented in Table A–3 below.

Table A-3: Summary of Available Hidroelectrica Generation Facilities

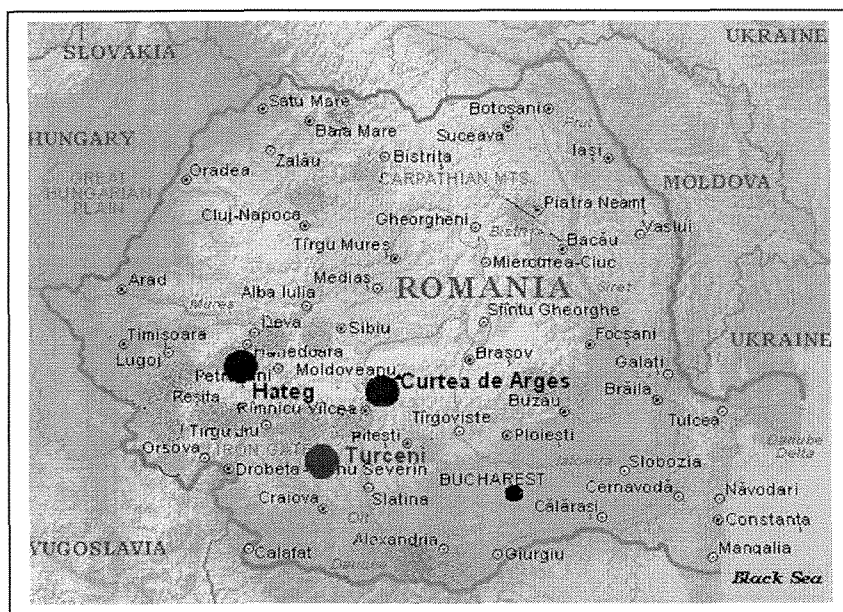
Nr	Branch Name	No. of HPP & PS	General Area of Operation	Installed Capacity		Annual Energy			
						2000		2001	
				MW	%	GWh/y	%	GWh/y	%
1	Ramnicu Valcea	34	Lotru, Olt	1,625	35.56	3,795	39.91	2,768	38.88
2	Bistrita	21	Bistrita, Siret, Prut	636	13.92	1,656	17.42	1,413	19.85
3	Cluj	17	Somesul Cald, Cris, Dragan, Iad	539	11.79	997	10.48	1,048	14.72
4	Curtea de Arges	26	Arges, Dambovita, Raul Targului	521	11.40	956	10.05	585	8.22
5	Hateg	12	Raul Mare	485	10.61	683	7.18	480	6.74
6	Sebes	4	Sebes	346	7.57	606	6.37	280	3.93
7	Targu Jiu	6	Cerna, Motru, Tismana, Jiu	193	4.22	449	4.72	238	3.34
8	Caransebes	3	Bistra Marului, Cerna	148	3.24	164	1.72	178	2.50
9	Buzau	4	Buzau	77	1.68	203	2.13	130	1.83
	Total	127		4,570	100	9,509	100	7,120	100

6. Bundle I with Emphasis on Major Coal or Lignite-Fired Capacity

In developing the first indicative bundle, the Hunton & Williams team chose the lignite-fired Terceni TPP to serve as an anchor for this package. While this power generating station consists of 7 x 330 MW of installed capacity, the new joint venture company will only be required to operate and maintain the four units that are presently available for dispatch to the grid as part of its minimum capacity requirement for this package. The remaining units may either be upgraded by the new owner at some future date or else mothballed by Termoelectrica as part of its requirement to retire up to 4,000 MW of installed capacity over the next five years. With respect to the 4 x 330 MW of currently available capacity at this power station, all four units have recently been upgraded and offer attractive thermal operating efficiencies. The plant is also situated near the Oltenia lignite field, which produces the lowest cost fossil fuel currently available in Romania today. A tabular summary of the suggested first bundle is presented in Table A-4 below, along with locator map.

Table A-4: Unit Composition of Bundle I by Type, Capacity, and 2001 Production Level

No.	Type of Plant	Plant or Cascade Name	Installed Capacity		Available Capacity		Electricity Production in 2001	
			MW	%	MW	%	GWh	%
1	TPP	Turceni	2,310	69.66	1,320	56.75	4,744.051	81.67
		Total TPP&CHP	2,310	69.66	1,320	56.75	4,744.051	81.67
2	HPP	Curtea de Agres	521	15.71	521	22.40	585.000	10.07
3	HPP	Hateg	485	14.63	485	20.85	480.000	8.26
		Total HPP	1,006	30.34	1,006	43.25	1,065.000	18.33
		Total for Bundle I	3,316	100.00	2,326	100.00	5,809.051	100.00

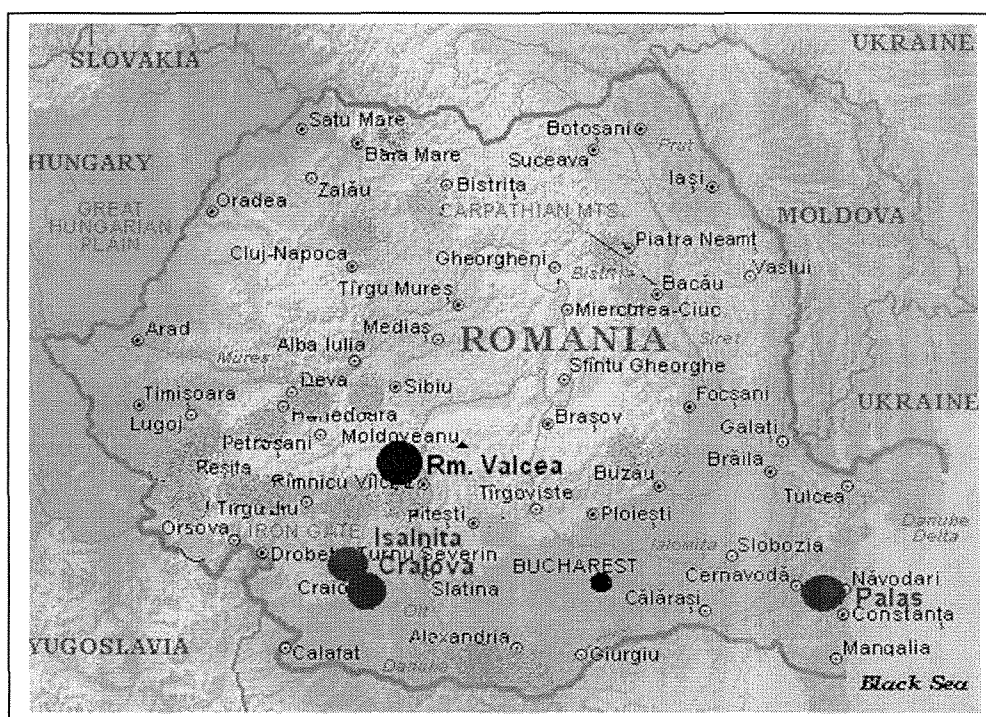


7. Bundle II with Emphasis on Major Hydroelectric Cascade

Similarly, the Hunton & Williams team selected the Ramnicu Valcea HPP to serve as an anchor for the second indicative bundle. This cascade is the second largest hydroelectric facility in the country after Iron Gates I & II, and should be considered a fairly attractive investment opportunity by the private sector. So much so that the team felt that the balance of capacity should be comprised of thermal plants that still require major modernization and environmental retrofit programs. A tabular summary of the entire second bundle is presented in Table A-5 below, along with locator map.

Table A-5: Unit Composition of Bundle II by Type, Capacity, and 2001 Production Level

No.	Type of Plant	Plant or Cascade Name	Installed Capacity		Available Capacity		Electricity Production in 2001	
			MW	%	MW	%	GWh	%
1	HPP	Ramnicu Valcea	1,625	57.93	1,625	69.44	2,768.000	50.07
		Total HPP	1,625	57.93	1,625	69.44	2,768.000	50.07
2	TPP	Isalnita	630	22.46	315	13.46	1,377.954	24.93
3	CHP	Craiova	300	10.70	300	12.82	1,028.144	18.60
4	CHP	Constanta Palas	250	8.91	100	4.27	353.696	6.40
		Total TPP&CHP	1,180	42.07	715	30.56	2,759.794	49.93
		Total for Bundle II	2,805	100.00	2,340	100.00	5,527.795	100.00



8. Bundle III with Emphasis on Oil and Gas-Fired Capacity

For the third indicative bundle, the Hunton & Williams team has recommended a package consisting primarily of oil and gas-fired units, plus sufficient hydro capacity to insure that the entire bundle can remain competitive in Romania's rapidly evolving electricity market over the mid to longer run. Some of the units selected for this bundle exceed the 30-year plant age criteria laid out initially, but have been included anyway because gas-fired plants are typically less complex to operate and maintain over time than comparably sized lignite or coal-fired units, and also require less upgrading to meet new and more stringent European Union environmental emission standards. A tabular summary of the entire third bundle is presented in Table A-6 below, along with locator map.

Table A-6: Unit Composition of Bundle III by Type, Capacity, and 2001 Production Level

No.	Type of Plant	Plant or Cascade Name	Installed Capacity		Available Capacity		Electricity Production in 2001	
			MW	%	MW	%	GWh	%
1	TPP	Iernut	800	29.42	800	34.50	2,493.624	42.61
2	CHP	Brazi	710	26.11	310	13.37	1,046.033	17.87
3	TPP	Borzesti Cd	420	15.45	420	18.11	469.836	8.03
4	CHP	Bucharesti Vest	250	9.19	250	10.78	794.619	13.58
		Total TPP&CHP	2,180	80.18	1,780	76.76	4,804.112	82.09
5	HPP	Cluj	539	19.82	539	23.24	1,048.000	17.91
		Total HPP	539	19.82	539	23.24	1,048.000	17.91
		Total for Bundle III	2,719	100.00	2,319	100.00	5,852.112	100.00

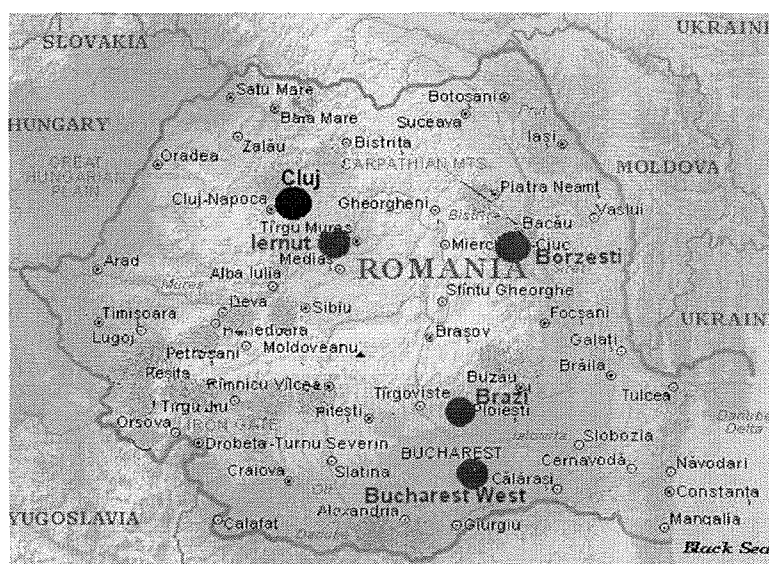


Fig. 3 Unit Composition of Bundle III

9. Bundle IV with Emphasis on Balanced Mix of Thermal Capacity

For the fourth indicative bundle, the Hunton & Williams team has recommended a package consisting primarily of a mix of lignite-fired and coal and oil-fired thermal units, plus all remaining hydro cascades with the exception of Bistrita, which will remain with Hidroelectrica. A tabular summary of the entire fourth bundle is presented in Table A-7 below, along with locator map.

Table A-7: Unit Composition of Bundle IV by Type, Capacity, and 2001 Production Level

No.	Type of Plant	Plant or Cascade Name	Installed Capacity		Available Capacity		Electricity Production in 2001	
			MW	%	MW	%	GWh	%

1	TPP	Rovinari	1,320	57.79	1,320	57.79	4,614.366	77.50
2	CHP	Buchuresti Progresul	200	8.76	200	8.76	506.351	8.51
		Total TPP&CHP	1,520	66.55	1,520	66.55	5,120.717	86.10
3	HPP	Sebes	346	15.15	346	15.15	280.000	4.71
4	HPP	Targu Jiu	193	8.45	193	8.45	238.184	4.00
5	HPP	Caransebes	148	6.48	148	6.48	178.328	3.00
6	HPP	Buzau	77	3.37	77	3.37	130.000	2.19
		Total HPP	764	33.45	764	33.45	826.512	13.90
		Total for Bundle III	2,284	100.00	2,284	100.00	5,947.229	100.00

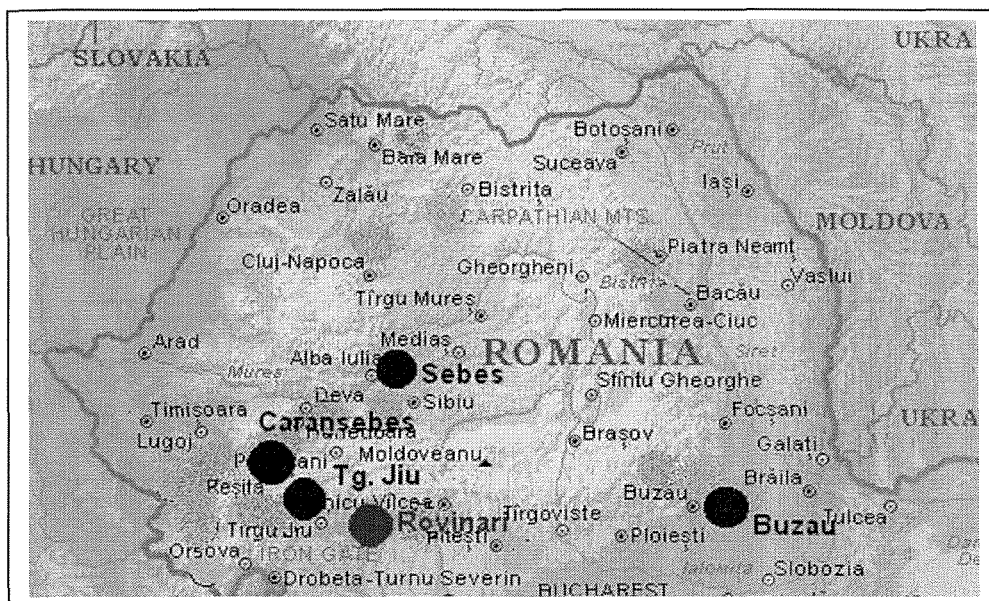


Fig. 4 Unit Composition of Bundle IV

10. Comparative Summary of Indicative Asset Bundles

An overview comparison of all four generation asset bundles from the standpoint of both installed and available capacity is presented in Table A-8 below:

Table A-8: Comparison of Indicative Asset Bundles by Installed and Available Capacity

Bundle No.	Installed Capacity in MW			Available Capacity in MW			Available Capacity Split in %	
	TPP & CHP	HPP	Total	TPP & CHP	HPP	Total	TPP & CHP	HPP
1	2,310	1,006	3,316	1,320	1,006	2,326	65.75	43.25
2	1,180	1,625	2,805	715	1,625	2,340	30.56	69.44
3	2,180	539	2,719	1,780	539	2,319	76.67	23.24

4	1,520	764	2,284	1,520	764	2,284	66.55	33.45
Total	7,190	3,934	11,124	5,335	3,934	9,269	57.56	42.44
Average	1,798	984	2,781	1,334	984	2,318	57.56	42.44

Similarly, an overview comparison of all four bundles from the perspective of electricity produced in 2001 is presented in Table A-9 below:

Table A-9: Comparison of Indicative Asset Bundles by Electricity Produced in 2001

Bundle No.	2001 Electricity Production in GWh			2001 Electricity Production Split by Source in %	
	TPP & CHP	HPP	Total	TPP & CHP	HPP
1	4,744.051	1,065.000	5,809.051	81.67	18.33
2	2,759.794	2,768.000	5,527.794	49.93	50.07
3	4,804.112	1,048.000	5,852.112	82.09	17.91
4	5,120.717	826.512	5,947.229	86.10	13.90
Total	17,428.674	5,707.512	23,136.186	75.33	24.67
Average	4,357.169	1,426.878	5,784.047	75.33	24.67

The average size of each indicative bundle has turned out to be just slightly higher than the targeted range for available capacity, while all of the bundles fall squarely within the targeted range for electricity produced in GWh per annum. This latter selection criteria is more important in any case because investors tend to make decisions based more on proven electricity production capability of a given asset bundle rather than capacity available since revenue projections and profits are directly related to GWh produced.

11. Disposition of Remaining Thermal and Hydro Assets

The balance of generating assets not contained in any of the four indicative bundles described above will either remain under the ownership and overall operational control of Termoelectrica and Hidroelectrica, or in some instances be transferred to a municipality or retired over a five-year schedule as part of the overall privatization process as indicated below in Tables A-10 and A-11, respectively.

Table A-10: Generating Assets Remaining Under Public Sector Ownership and Operational Control Besides the Cernavoda Nuclear Station

No.	Type of Plant	Thermal Plant or Hydro Cascade Name	Installed Capacity in MW	Available Capacity in MW	2001 Electricity Production in GWh
<i>Termoelectrica Operating Plants</i>					
1	TPP	Mintia (Deva)	1,260	1,050	4,068.274
2	TPP	Braila	960	420	1,046.033
3	CHP	Buchaesti Sud	550	450	1,043.000
		Total TPP&CHP	2,770	1,920	6,157.307
<i>Hidroelectrica Operating Cascades</i>					
4	HPP	Portile de Fier (Iron Gates I & II)	1,335	1,335	7,357.544
5	HPP	Bistrita	636	636	1,413.000
		Total HPP	1,971	1,971	8,770.544
<i>Combined Operating Units in Public Sector</i>					
		Total TPP, CHP, & HPP	4,741	3,891	14,927.851

Table A-11: Generating Assets Slated for Retirement as Part of the Overall Privatization Process and Unfolding Strategy Over Time

No.	Type of Plant	Thermal Plant Name	Installed Capacity in MW	Available Capacity in MW	2001 Electricity Production in GWh
<i>Plants Slated for Total Retirement or Transfer to Municipality</i>					
1	CHP	Paroseni	300	100	175.676
2	CHP	Grozavesti	100	100	291.812
3	CHP	Bucharesti Titan	8	8	14.070
4	CHP	Galati	535	375	1,048.214
5	TPP	Doicesti	400	400	536.218
		Total Plant Closings	1,343	983	2,065.990
<i>Selected Unit Shutdowns at Operating Facilities</i>					
6	TPP	Non-Operating Units at Torcenii	990	0	0
No.	Type of Plant	Thermal Plant Name	Installed Capacity in MW	Available Capacity in MW	2001 Electricity Production in GWh
5	TPP	Non-Operating Units at Isalnita	315	0	0
	CHP	Non-Operating Units at	400	0	0

		Brazi			
	CHP	Non-Operating Units at Constanta - Palas	150	0	0
	TPP	Non-Operating Units at Mintia	210	0	0
	TPP	Non-Operating Units at Braila	540	0	0
	CHP	Non-Operating Units at Bucharesti Sud	100	0	0
		Partial Retirements	2,705	0	0
<i>Total Assets to be Retired or Possibly Transferred to Local Jurisdictions</i>					
		Total Plant Closings and Partial Retirements	4,048	983	2,065.990

APPENDIX B

Preliminary Financing Plan for the First Indicative Bundle

This appendix presents a suggested Preliminary Financing Plan for the first indicative generation asset bundle to be privatized in the Romanian power sector. As such, it highlights various sources of both debt and equity, as well as likely backstop guarantee requirements, for the purchase and long-term lease of approximately 2,300 MW of thermal and hydro resources including estimated cost of upgrading this bundle to European Union environmental emission standards, to be financed on a limited recourse or non-recourse project finance basis. It is assumed that the total amount of financing to be raised for this asset bundle through such a project financing is 500 million U.S. Dollars, and that the new owner of these assets will be a Romanian joint venture company whose outstanding shares are held as follows: 60.01 percent by the private strategic investor, and the remaining 39.99 percent by both Termoelectrica and Hidroelectricita to be split in proportion to the average GWh of electricity produced over the previous two years for the respective operating units contributed to the bundle. Finally, it is understood that the Government of Romania will not be providing any performance undertakings or sovereign guarantees for this project financing, not even to secure a partial risk guarantee from a multilateral development bank such as World Bank.

1. Planned Debt-to-Equity Ratio

A 70/30 debt-to-equity ratio appears to be an appropriate level of gearing for this proposed \$500 million generation acquisition and planned modernization program for the first indicative asset bundle on a limited recourse or non-recourse project finance basis, especially given the high caliber of strategic investors that have already expressed preliminary interest in such a transaction and are expected to bid on such assets.

2. Potential Sources of Debt

Potential sources of debt are presented in Table B-1 below for a project that in the broadest sense can be characterized as an environmental project for financing purposes.

Table B-1: Potential Sources of Debt and Mezzanine Financing

Sources of Debt and Mezzanine Financing	Amount in Millions US\$	Percent of Total Debt	Percent of Total Costs
Joint EBRD/International Finance Corporation "A" Loan	60.0	17.1	12.0
Jointly Underwritten EBRD/International Finance Corporation "B" Loan	140.0	40.0	28.0
Export Credit Agencies	105.0	30.0	21.0
Black Sea Trade & Development Bank	20.0	5.7	4.0
International Finance Corporation "C" Loan	25.0	7.2	5.0
Total Debt	350.0	100.0	70.0

3. Terms and Conditions of Loans and Mezzanine Financing

At the present time, the various potential sources of debt listed above are exhibiting the following characteristics in the market:

European Bank for Reconstruction and Development/International Finance Corporation “A” Loan—Ceiling of 25 percent of overall project cost up to a maximum of \$100 million, 10-12 year tenor plus 2-year grace period, and interest rate of LIBOR plus 350-450 basis points for Romania today

European Bank for Reconstruction and Development/International Finance Corporation “B” Loan—Commercial bank syndication jointly underwritten by EBRD and IFC, 5-7 year tenor unless a partial risk guarantee can be obtained from EBRD without a sovereign guarantee requirement which would extend the loan repayment period by approximately 2 years, and interest rate of LIBOR plus 350-450 basis points for Romania today unless a partial risk guarantee can be obtained from EBRD without a sovereign guarantee requirement which would save about 100 basis points

Export-Import Bank of the United States—Loan amount equal to 85 percent import cover plus 15 percent local costs as well as capitalization of exposure fees and interest during construction since all retrofits and upgrades would be considered environmental projects, maximum of 10 year repayment term plus up to 3-year grace period, interest rate of LIBOR plus 300-400 basis points, and a one time risk exposure fee of approximately 10-11 percent of the total amount of the export credit being offered (Please note: all European export credit agencies will have similar programs with almost identical terms and conditions)

Black Sea Trade & Development Bank—Maximum loan ceiling of \$20 million per project, 20-year tenor for the power sector, interest rate of LIBOR plus 400 basis points, with the possibility of a Lei swap as part of the overall package

International Finance Corporation “C” Loan—Subordinated or convertible debt with fixed 5-7 year repayment period or else preferred stock with no repayment schedule or some combination, debt will be unsecured with higher interest rates typically in the 10-13 percent range, expected return on investment of 15-18 percent if and when converted to equity

4. Likely Sources of Equity

Likely sources of equity investments for this proposed generation asset sale and upgrade project are presented in Table B-2 below.

Table B-2: Likely Sources of Equity

Sources of Equity and Offsetting Credits	Amount in Millions US\$	Percent of Total Equity	Percent of Total Costs
Strategic Investor(s)	75.0	50.0	15.0
Multilateral Investors such as EBRD and/or the International Finance Corporation	20.0	13.3	4.0
Institutional and Local Investors	30.0	20.0	6.0
Sales of Carbon Emission Reduction Credits to both the Swiss and Dutch	25.0	16.7	5.0
Total Equity	150.0	100.0	30.0

If required to meet a more stringent debt to equity requirement, the \$25 million IFC “C” Loan presently scored as subordinated debt can be structured as quasi equity in the form of a convertible debenture, which would revert to preferred shares in the Romanian joint venture company after a period of say 5 years. This would yield a less highly leveraged debt to equity ratio of 65/35 in the longer term. Moreover, the net effect of such a strategy would be a marginally lower electricity tariff during the first five years than might otherwise have been expected if the lenders had insisted upon a 65/35 debt to equity ratio from the outset.

5. Rate of Return Expectations for Various Investor Categories

The Hunton & Williams team met with a number of interested strategic investors, IPPs, electric utility operators, multilateral investors, and selected institutional investors over the past six months in an effort to both inform them of this potential investment opportunity, as well as gauge their current expectations regarding anticipated or required rates of return for such a major investment in the Romania power sector. The results of this informal survey are presented in Table B-3 below.

Table B-3: Internal Rate of Return Expectations by Investor Category

Investor Category or Type	Expected or Required IRR Range
Strategic Investor	17-20 %
IPP or Utility	18-20 %
EBRD and IFC	At least 15 %
Institutional Investor	24-30 %

6. Backstop Guarantee Options

It is assumed that the various potential lenders highlighted above will in all likelihood require many or all of the following backstop guarantees to secure their loans:

- Mortgages on all joint venture company plant facilities, land, and other related assets.
- Assignment of all outstanding shares of the joint venture company until such time as all senior debt has been retired
- Assignment of all power purchase agreements transferred to the joint venture company by ANRE from its pool of regulated contracts
- Establishment of a prepaid reserve account sufficient to cover at least six months of debt service and fixed O&M
- Creation of a disbursement and payment mechanism that is free from governmental interference
- Completion guarantee from the turn key contractor undertaking any plant modernizations, retrofits, or environmental upgrades, including appropriate liquidated damages
- Operating guarantee from the new international operator of the various thermal and hydro power units in this particular bundle (if different from the strategic investor), including enforceable penalties
- Expropriation insurance coverage and MIGA or equivalent breach of contract insurance in the event of a commercial default for whatever reason

APPENDIX C

Summary of International Privatization Transactions by Country

SECTION II

Review of the Romanian Power Sector's Legislative and Regulatory Framework

I. The Constitutional Framework

A. Legislative Competences

1. The Current Situation

Romania's Constitution prescribes the functions and competences of each of the branches of Romania's governing institutions. While Parliament passes laws,¹ the executive branch (the "Government") may issue Ordinances, Emergency Ordinances (EOs) and Government Decisions (GDs).² Ordinances are norms issued by the Government, based on a enabling legislation in areas precisely delineated by the law. They enter into force on the date established by the Government. EOs are intended to be issued in exceptional cases and must be submitted for approval to Parliament. If not otherwise in session, Parliament must be convened.³ EOs must be approved or rejected by a law passed by Parliament;⁴ however, they become effective on the date submitted to Parliament.⁵ GDs are secondary legislation intended to facilitate the execution of laws passed by Parliament.⁶

Under this constitutional framework, general policies for the development of specific sectors are to be drawn up by the Government and submitted to Parliament for approval. Thus, EO 63/1998 provides that the Government will develop a medium-term energy policy, addressing specific topics and containing concrete plans for a two-year energy program, and will submit such policy to Parliament.⁷ The Medium-Term Energy

¹ See ROM. CONST., arts. 64, 72.

² See *id.*, arts. 107, 114.

³ See *id.*

⁴ See *id.*, art. 114(5). Under Article 114, Parliament has the ability to delegate certain of its legislative responsibilities under particular circumstances to the Government. While the Constitution expressly provides that Parliament must approve or reject an ordinance through a law, it is implicit that Parliament may modify that ordinance through the passage of such law.

⁵ See *id.*, art. 114(4).

⁶ See *id.*, art. 107(2).

⁷ Emergency Ordinance 63/1998, as amended by EO 67/2000 (hereinafter "EO 63/1998"), arts. 67-68

Strategy, issued belatedly in June 2001, was intended to comply with this promise. Because of the delay in issuing the strategy, ANRE proceeded to issue numerous rules and regulations for the sector in 1999 and 2000 without having the benefit of such policy as guidance.

2. Areas of Concern to Potential Investors

The Government's heavy reliance on EOs and GDs in matters of privatization and energy sector reform--over a dozen EOs and GDs have been issued in the electricity and heat sectors alone--is a matter for concern. EOs and GDs are being used far more often than exceptionally, as envisioned under the Constitution. While EOs allow the Government to quickly implement changes in the face of opposition in the legislature, their ease of passage is also a factor in contributing to an unstable and constantly changing legal framework.

Lack of consensus within the executive branch and frequent changes in Government have obviously contributed to the instability in the legal framework. For example, in 1999 the state budget law⁸ prepared by the Ministry of Finance suspended investment incentives (tax deductions) for foreign direct investors, which were granted two years earlier and ironically had been guaranteed as unalterable for a five-year period.

The lack of time limit on Parliament's authority to act on an EO after it has been submitted to it by the Government may be another factor.⁹ The key EO applicable to Romania's electricity and heat sectors, for example,¹⁰ was submitted to Parliament for its approval in July 1998, was modified by a subsequent EO, but has yet to be ratified, rejected or modified by Parliament.

Finally, there is no requirement that any subsequent amendments safeguard investments made in reliance on the previous legal regime. While "grandfathering" has been present in the provisions of some of the Laws and EOs with respect to privatization,¹¹ this has not always been the case. No accommodation was made for investors who might have acted in reliance upon the 1997 tax incentives.¹² The prospect of repeal with possible adverse consequences perpetuates the perception of legal and regulatory instability.

⁸ Law 36/1999.

⁹ See ROM. CONST., art. 114(4).

¹⁰ See generally, EO 63/1998.

¹¹ See, e.g., Law No. 137/2002, art. 49; EO 88/1997, art. 36.

¹² EO92/1997.

3. Recommendations

1. A Constitutional amendment to require Parliament to act within a specified period, or allow an EO to become law if not acted upon within such period, would resolve the uncertainties created by the EOs.¹³
2. Proposed laws which amend previously issued EOs or GDs of general applicability should, as a matter of course, incorporate provisions safeguarding any investments made in reliance on the EOs in effect at the time the investment was made.

B. The Judiciary

1. The Current Situation

The judicial system is well developed and the appeals process for commercial disputes is clearly delineated.¹⁴ All litigation involving privatization issues are now required to be heard in the Commercial Division¹⁵ of Romania's County Courts. Moreover, the Constitution provides adequate safeguards for judicial independence since judges, who are nominated by the Superior Council of the Magistracy and appointed by the President, may be removed only in accordance with the law.¹⁶ The Superior Council of the Magistracy also has powers to promote, transfer and sanction judges,¹⁷ and acts as a disciplinary council for them.¹⁸ Issues as to the constitutionality of laws are heard by the Constitutional Court, which is comprised of nine judges: three each appointed by the Chamber of Deputies, the Senate and the President.¹⁹ They are declared independent by the Constitution and not subject to removal during their term of office, which is nine years.²⁰ Efforts have been made to further reduce and limit political involvement in the

¹³ A Parliamentary Committee is currently considering amendments to the Constitution, so the opportunity for such changes is available.

¹⁴ ROM. CONST, art. 128.

¹⁵ Romania's judiciary functions on four levels: local courts having original and general jurisdiction except over commercial disputes; County Courts (Tribunals) having original jurisdiction over commercial matters not exceeding 10 billion lei, administrative cases and serious criminal matters, as well as appellate jurisdiction over the local courts; Courts of Appeal having appellate jurisdiction ordinarily but also original jurisdiction over commercial cases exceeding 10 billion lei and cases involving the administrative decisions of public officials such as the Ministry of Industry and Resources (MIR); and the Supreme Court, which is the highest court in Romania and a court of appellate jurisdiction.

¹⁶ *See id.*, art. 123.

¹⁷ *Id.*, art. 124(1)

¹⁸ *Id.*, art. 133(2)

¹⁹ *Id.*, art. 140(1)-(2).

administration of justice by establishing qualification criteria and independence requirements for magistrates.²¹

2. Areas of Concern to Potential Investors.

Judicial reform is beyond the scope of this report and is more appropriately addressed by other organizations. However, insofar as encouraging investments in the energy sector are concerned, any measures that will enhance the objectivity of the judicial process and the competence of the judges in commercial matters would be of benefit. While the Constitutional framework establishing the judicial system is structured so as to be open and transparent, courts in Romania are not perceived by investors to have enough understanding of commercial issues to deal with complex commercial matters. Moreover, they have not been seen to be as immune to outside influence as investors would like. Effective administrative enforcement of judicial decisions has also been thought to be lacking. These perceptions contribute to the cost of doing business in Romania.

3. Recommendations

1. The Government should institute stronger enforcement of measures to combat judicial misconduct and consider an increase in judges' compensation to militate against potential corruption.
2. Improved training in commercial issues for County Court and Supreme Court judges should be introduced.

II. The Legal Framework Supporting Restructuring And Privatization

A. State Institutions Involved in Privatization of Termoelectrica and Hidroelectrica

1. The Current Situation

Responsibility for the planning and execution of privatization programs is dispersed among several state institutions. The Government prepares the policies, submits them to Parliament for approval and ensures their implementation. It co-ordinates and controls the activity of the ministries and public institutions which have a role in effecting privatization, and takes mandatory measures for the acceleration and completion of the privatization process. Until recently, the Government relied on the Romanian Development Agency (RDA)²² to develop a national privatization strategy; however, the enabling legislation delegating such tasks to the RDA was recently repealed.

²⁰ See *id.*, arts. 143, 140.

²¹ See, e.g., Law No. 92/1992.

²² See EO 88/1997, art 4², *repealed by* Law No. 137/2002, art. 56(1).

The public institution which owns the shares on state-owned companies is in charge of overseeing the actual privatization process, although the privatization methods selected by the public institution are subject to the Government's approval. In the case of Termoelectrica and Hidroelectrica, which hold the bulk of the country's electric generating assets, the majority shareholder is MIR. The shares in certain generating assets were transferred to the State Privatization Authority (APAPS) prior to enactment of EO 88/1997 and a number of cogeneration plants providing both district heating and power were recently transferred from Termoelectrica's portfolio to the municipalities which they serve.²³

The public institution responsible for a state-owned company may accelerate a privatization by delegating to an agent the responsibility for management of carrying out a privatization.²⁴ A privatization agent may be any legal entity specialized in financial activity, as well as law firms or professional law associations, irrespective of whether they act in their individual capacity or in association, or consortia formed out of such entities.²⁵ Privatization agents act in the name and for the account of the public institutions involved and are entitled, subject to the terms and conditions of their mandate, to exercise all rights attached to the shares of such companies, except for any rights to dividends and any pre-emptive rights.²⁶ The privatization agents' competences include measures to be undertaken in connection with the privatization, restructuring or liquidation processes.²⁷ However, the public institution retains the authority to control the execution of the privatization and to reject the agent's activities.

In 2002, the Government created the position of a special administrator for the purpose of accelerating the privatization of state-owned companies,²⁸ possibly because the previous privatization framework was not providing the desired results. The special administrator may be given an exclusive mandate by the public institution involved²⁹ to exercise special management powers, including financial management. These include: divestiture, merger, the sale of assets, restructuring, outsourcing, transformation of debt into shares,

²³ See GD 104/2002; GD 105/2002. This Section will concentrate on the legal issues involved in privatizing Termoelectrica and Hidroelectrica's assets and will not address the issues pertaining solely to the legal regime applicable to assets owned by APAPS and the local municipalities.

²⁴ See Law No. 137/2002, art. 42 *et seq.*

²⁵ See, *id.*, art. 3e.

²⁶ See Law No. 137/2002, art. 44.

²⁷ See *id.*, art. 42(2).

²⁸ See *id.*, art. 16 *et seq.*

²⁹ See *id.*, art. 16(3).

rescheduling of debts and other measures needed to make the company more attractive to buyers.³⁰ Such powers may not be given to the privatization agent.³¹

In exceptional cases, “depending on economic circumstances and on the interest shown by potential buyers or on other conditions that might have a negative influence on the results of the privatization process,”³² the management of the public institution involved may decide to modify or revoke an offer of sale or may change the privatization method selected.

2. Areas of Concern to Potential Investors

The policy established in the Medium-Term Energy Strategy for privatization of the Termoelectrica and Hidroelectrica generating assets lacks a real understanding of what strategic investors would want or require to invest funds in the generating sector. For example, it states that in order to speed up privatization, distribution can be completely privatized “while thermal generation can be privatized by 25-40%...[and] private investors may carry out also a significant number of hydro projects.”³³ Yet, rather than providing incentives for such investment, it dictates that the new hydropower projects to be completed are the partially constructed projects that a previous report had concluded were largely uneconomic and of little interest to private investors.³⁴ Similarly, as noted elsewhere in this Section, the restructuring of Electrica does not comport with customary conceptions of restructuring designed to attract private investment. Thus, to a potential investor, it does not appear that the policy being pursued by the Government is based on economic realities.

It is also unclear which agency or Governmental ministry is driving the privatization of generating assets. While in interviews with various Governmental officials, it appeared that the Ministry of Finance, advisors to the Prime Minister, the regulator and the commercial operator favored ceding control of the generating assets to strategic investors, it does not appear that this is the objective of either Termoelectrica or Hidroelectrica officials. With the abolition of the RDA, it is uncertain what agency other than MIR (which is also the shareholder of Termoelectrica and Hidroelectrica and may therefore be expected to have some conflicts of interest) will guide the privatization policy for the next draft of an energy strategy. An investor will look for clarity and predictability in the designated roles of the state institutions involved in establishing Government policy and overseeing privatizations. Uncertainty as to which Government entity or department has

³⁰ See *id.*, art. 16(4).

³¹ See *id.*, art. 42(3) (stating that “the public institutions involved cannot commission to the privatization agents the prerogatives provided by article 16.”).

³² Law 137/2002, art. 9.

³³ Energy Strategy, 5.2.

³⁴ See Section V of this Report.

the ultimate decision-making authority can result in wasted resources, paralysis in the decision-making process and costly delays.

The privatization legislation itself creates potentially conflicting roles for various Government entities. While the appointment of a privatization agent with specific expertise in privatizations is desirable to enhance the credibility of the privatization process, potentially overlapping competences with a special administrator may lead to confusion and increase the likelihood of challenges to these entities' authority, despite the efforts contained in Law No. 137/2002 to prevent redundancies. Moreover, even though the privatization agent is not allowed to receive a mandate to exercise powers expressly given to the special administrator,³⁵ the special administrator is given such broad powers that a conflict with the privatization agent's mandate would appear inevitable.³⁶ There appears to be no formalized mechanism to settle disputes over allegations of overlapping mandates.³⁷

It is also unclear whether the public institution involved retains the power to modify or revoke an offer after it has been accepted. Nor does the law specify what would constitute "exceptional" circumstances warranting a revocation or change in privatization method or whether such changes can be made after the Government has already approved the method selected by the privatization agent.

3. Recommendations

1. The Government should issue a blueprint for privatization of the generating sector which lays out detailed plans for legislative reforms to address the deficiencies in the legal framework and a time table that the Government is reasonably likely to be able to fulfill during its term in office. The Government should clarify which state institution, if any, now exercises the prerogatives previously exercised by the RDA and which departments in the Government are responsible for carrying out the privatization plans.

2. The Government should clarify further the authority of privatization agents and special administrators involved in privatization efforts and, so long as the terms of the mandate are not violated, the public authority involved should not be able to interfere in the decisions of the privatization agents or the methods selected by the special administrator. Providing privatization agents a legal role in assisting the public

³⁵ *Id.*

³⁶ *See id.*, art. 16(4)(f). The special administrator is to take "any measures that could make the company more attractive to the buyers," thereby arguably allowing the special administrator to execute liquidation operations permitted to the privatization agent if it makes the company attractive to buyers. *See id.*, art. 46 for the privatization agent's liquidation powers.

³⁷ This issue may be clarified when the Government issues implementing norms under Law No. 137/2002.

institution involved in formulating a mandate for the special administrator could lessen the chances for overlap between the two entities' roles.

3. Art. 9 of Law 137 should be clarified to limit the discretion of the public institution involved to interfere in the privatization process.

B. Privatization Methods Applicable to Termoelectrica³⁸

1. The Current Situation

There is no special law dealing with privatization methods applicable to energy sector assets,³⁹ except that for companies of strategic concern, the Government has the option of retaining a "golden share" in the event of a privatization.⁴⁰ Under GD 266/1993, the energy sector is considered a strategic sector of the national economy and, as companies of "strategic concern,"⁴¹ Termoelectrica and Hidroelectrica are governed by a special legal regime.

The "golden share" grants the State a number of powers with respect to the management of the newly privatized company, among them (a) the ability to appoint representatives in the privatized company's Board of Administration; and (b) the ability to block certain decisions, whether taken during the general meeting of the shareholders or at a meeting of the Board of Administration, which concern the pledging or mortgaging of assets, winding up, liquidation or merger, to the extent those decisions could adversely affect consumer protection, the activity of the company, competition or national interests.⁴² Should the Government wish to retain these "golden share" powers, it must do so when selling its majority ownership interest in the company. The Government can rescind its "golden share" powers through a Government Decision, substituting them with ordinary shares in the company.

The general laws governing privatization of state-owned companies provide the Government with a wide variety of options for the introduction of foreign direct

³⁸ Because Hidroelectrica's dams and reservoirs are state public property, they cannot be sold. The introduction of foreign direct investment into Hidroelectrica will therefore be addressed separately.

³⁹ EO 63/1998 states at art. 83(1) that privatization in the energy sector is to be done under EO 88/1997.

⁴⁰ See EO 88/1997, art. 34(1).

⁴¹ Termoelectrica and Hidroelectrica were designated as companies of strategic concern by the Government because they (a) came about as a result of the splitting up of the national electric company CONEL S.A.; and (b) have as their business purposes the activity of producing and distributing electricity.

⁴² EO 88/1997, art. 34(2).

investment in Termoelectrica, assuming the company's property can all be classified as state private property. The relevant state institution may use any of the following methods: (a) sale of shares⁴³; (b) increase in share capital; (c) transfer of social assets⁴⁴ at no cost, or sale of the company's assets; or (d) any combination of the above.

Sale of Shares. The sale of shares can be by public tender or by negotiation with strategic investors. For selected companies (specified in a Government Decree, based on the sector, number of employees, the company's financial situation, level of industrial development and level of regional unemployment), the public institution may sell its shares for the symbolic sum of one Euro.⁴⁵ The buyer is selected based on its proposals regarding capital investment and job creation, but more specific and detailed criteria remain to be described in implementing norms.⁴⁶

Revenues collected from the sale of shares are to be transferred to the state budget or the local budget as appropriate.⁴⁷ Only expenses related to the privatization and overdue loan obligations to foreign lenders which were guaranteed by the Government can be deducted from such amounts.

Increase in Share Capital. An increase in share capital may be selected based on the results of a feasibility study conducted to determine the company's need for capital. Should this option be exercised, an investor would receive shares as consideration for an infusion of cash or "hi-tech equipment." Private shareholders that already own shares in the company will be give a preferential right to subscribe in this manner to the new shares.⁴⁸

⁴³ Share sales for state-owned companies whose shares are not publicly traded are governed by Article 13 of EO 88/1997, art. 47(1) of Law 137/2002. Methods for share sales include: (a) public offer; (b) selling methods specific to the capital market; (c) negotiation; (d) open outcry or sealed bid tender; (e) depository receipts issued by investment banks on the international capital markets; and (f) any combination of the preceding methods.

⁴⁴ Social assets are defined as non-core assets used for employees, such as childcare facilities, health units, blocks of flats, restaurants, schools, etc. Law 137/2002, art. 3d.

⁴⁵ See Law No. 137/2002., art. 5(2).

⁴⁶ See *id.*

⁴⁷ See EO 88/1997, art. 9(1).

⁴⁸ See Law 137/2002, art. 14(4).

Asset Transfers. Asset transfers may take several forms. Assets may be sold through open bidding with the highest price bid winning,⁴⁹ or leased with an irrevocable option to purchase.⁵⁰ The sale of assets appears to be intended primarily for companies with heavy debt loads, with the proceeds of such asset sales being earmarked for debt repayment.⁵¹

2. Areas of Concern to Potential Investors

The broad framework established for diminution of state ownership in a going concern is consistent with customary international norms and their familiarity should provide potential investors with some degree of comfort. There are some issues that may be of concern, however.

State Private Property. If a complete inventory of the assets owned by Termoelectrica and their classification has not yet been completed, this needs to be done to ensure that all of Termoelectrica's patrimony can be privatized.

Proposed Restructuring. Based on the Government's stated objectives in the Medium-Term Energy Strategy and its decision regarding the privatization of electric distribution assets to date, it is not clear that the Government actually intends to apply the norms described above to Termoelectrica.

The Medium-Term Energy Strategy states that approximately US \$1.65 billion in capital contributions is required to complete planned improvements and additions between 2001 - 2004, with US \$490 million earmarked for rehabilitation of thermal heat and power plants.⁵² It lists six thermal power plants with a total capacity exceeding 1280 MW to be rehabilitated through 2004, including some of the most competitive plants (Deva, Braila, Turceni, Bucuresti-Sud) and proposes the rehabilitation with foreign funds of three other thermal power "groups" totaling 410 MW. Yet it is clear from the discussion on financing, that the Government intends to obtain the majority of such rehabilitation funds

⁴⁹ See EO 88/1997, as amended, art. 24(3). Social assets may be transferred for free, with preference going to local public authorities. See Law 137/2002, art. 15

⁵⁰ See EO 88/1997, art. 24.

⁵¹ See *id.*, art. 26. Proceeds from the sale of assets are to be used for specific purposes: (a) the repayment of debts owed to state and local budgets, including repayment of debts owed to the Ministry of Finance for covering debt guarantees by MOF as well as secondary loans made from external borrowings contracted directly by the state; (b) the repayment of debts owed towards the social insurance budget and the budget of special funds; (c) repayments of other debts owed; (d) making investments; (e) financing activities included as part of the business purpose of the company; (f) expenses incurred in achieving compliance with legal obligations under environmental protection laws; (g) other destinations.

⁵² Energy Strategy, art. 4.3.2.

from external bank loans and not private equity investors.⁵³ Its privatization strategy contemplates the breakup of Termoelectrica into two entities in 2002, privatizing 25-40% of the thermal generation sector (with two coal fired stations being mentioned), and the concession of certain hydropower stations on a BOT basis.⁵⁴ With regard to restructuring of the distribution sector, the Medium-Term Energy Strategy states that Electrica will be reorganized and split into a “parent” company and eight regional subsidiaries and one ancillary services company, and that distribution can be completely privatized.

Consistent with its Medium-Term Energy Strategy, the Government in December of 2001 reorganized Electrica 19 branches into eight subsidiaries.⁵⁵ The subsidiaries are separate legal persons with their own statutes and distribution and supply licenses; however, all of the shares in the eight companies are held by Electrica. Moreover, Electrica retains exclusive control over investment decisions, planning, and implementation, as well as control over its subsidiaries’ distribution and supply strategies.⁵⁶ In addition, the eight subsidiaries must contract for maintenance, repairs and other support services with the parent, and purchase power at the levels determined by parent under the portfolio and long-term bilateral supply contracts executed by Electrica. Such contracts are to be allocated to the subsidiaries by Electrica with the approval of ANRE.

It appears that the Government may have a similar model in mind for Termoelectrica--in conversations with Government officials, this structure was cited as an having advantages for private investors, because the newly-privatized “subsidiary” could enter into a long-term power purchase agreement (PPA) with either Electrica or Termoelectrica. The PPA would guarantee the private investor a certain price for the power output from the refurbished plants for a definite period and the Termoelectrica would blend this purchase price into its portfolio of sales contracts.

While this scenario may reduce market risk for such period as the PPA remains in place, it is unlikely that investors will elect to invest in just two coal-fired plants (particularly if they are among the less attractive assets) solely on the strength of a PPA with Electrica or Termoelectrica. The uncertainties surrounding market liberalization and structural reform of the sector are too great. It is unclear, for example, whether Electrica in its present form will continue to exist (as created, it is unlikely to possess much appeal for investors) or for how long Termoelectrica would be able to blend purchases under a PPA into its portfolio contracts. Any capital investments would need to be recouped through higher tariffs than are currently being charged by Termoelectrica, so Termoelectrica

⁵³ *Id.*, art. 4.3.5.

⁵⁴ *Id.*, art. 5.2.

⁵⁵ GD 1342/2001.

⁵⁶ *Id.*, art. 3(4) and 3(5).

would quickly become uncompetitive if it were to try to blend numerous higher-priced power purchases with its existing supply portfolio.

These uncertainties would probably outweigh any potential benefits flowing from a PPA, unless the PPA were accompanied by a Government guarantee (which is unlikely, given the opposition by the IMF) or the opening of the market were to follow a blueprint which takes into account the phased-in approach to privatization of electric generation described elsewhere in this report.

However, no investor would accept the kind of outsourcing and service restrictions that were imposed on Electrica's subsidiaries, since improved efficiency in procurement is one of the principal ways in which strategic investors hope to cut costs.

Golden Share. If the Government wishes to retain a "golden share" in Termoelectrica, investors will be concerned that the Government will use the powers associated with its "golden share" to block management and operational reforms. They will also view as a drawback their inability to pledge or mortgage assets in order to secure financing without the Government's assent. While it may be of less concern if the Government does not have a "golden share" in the company, it is also unclear whether the Government can declare a company to be of strategic concern, even after it ceases to own a majority of shares in the company. This possibility could be of concern to potential investors.

Share Sale for One Euro. While the option of selling the Government's shares for the nominal value of one Euro initially appears attractive as a means of ensuring significant capital investments in Termoelectrica, the usefulness of this option is diminished by the limit imposed on the public institution's obligations to indemnify a private investor for certain losses. The public institution involved may, but is not required to, indemnify an investor for damages it suffers because of undisclosed environmental problems, third party obligations and restoration of property previously nationalized.⁵⁷ However, this indemnity is now limited to 50% of the value of the price the buyer paid for the company's shares.⁵⁸ Thus, for a company whose shares are sold for one Euro, there is effectively no indemnity. Public institution selling shares for one Euro would have no incentive to honestly disclose environmental problems or claims by previous owners.

Transparency. A strategic investor may also be concerned about the application of "grid criteria" to evaluate competing bids. Because of past problems with privatizations in Romania, investors will want to be assured of transparent procedures and objective criteria. Since the grid criteria against which the public institution conducting the sale of shares evaluates bids and offers is set by the

⁵⁷ See Law 137/2002, arts. 27, 28, 29.

⁵⁸ See *id.*, art. 30(1).

public institution involved, there could be a concern that scoring of the bids will not be fair and objective.

Transfer of Proceeds. Finally, the requirement that proceeds from the sale of shares be transferred to the state budget may also preclude the use of some of the models proposed in this report, unless the term “programs for development” is broad enough to encompass funding of a pension scheme.⁵⁹

3. Recommendations

1. Termoelectrica should verify that a complete inventory of Termoelectrica’s has been undertaken and that all of its assets being considered for privatization have been declared private state property by the Government.
2. The restructuring of Termoelectrica must be achieved in such a way as to give the private investor an option to buy attractive assets and to implement efficiency measures. As demonstrated in our proposed models, this can be achieved in a number of ways, while still using some of the structures proposed by the Government. The new energy blueprint should articulate a vision for privatization of energy generation assets which allows the Government to achieve its goals while taking into account potential investors’ concerns.
3. If the Government intends to retain its “golden share” rights, it should agree to limit the exercise of such rights in privatized generating companies; however, it would be preferable for the Government to relinquish its “golden share” powers over Termoelectrica and convert them into an ordinary share. The Government should also clarify that it may not declare a company to be of strategic concern once it has sold shares or assets to private investors.
4. In a share sale, the committee selecting the winners should be made up of non-interested third parties to ensure investor confidence in the selection process.
5. If the Government wants to make the sale of shares for the nominal sum of one Euro workable, it should either exempt buyers from any liability associated with non-disclosed environmental and ownership obligations, or impose a reasonable ceiling on such liability that would provide some incentive for the selling institution to diligently investigate existing contamination or title problems.
6. Based on the preferred model we have selected, it would seem necessary to clarify the law to allow the proceeds of a share sale to be escrowed and/or contributed to pension funds or other funds to mitigate any social impacts from the privatization.

⁵⁹ It appears from published reports in *Bucharest Business Week*, Vol. 6, No. 15, (April 22-28, 2002) at 2, that the Government already envisions using the funds from privatizations for such purposes.

C. Privatization Methods Applicable to Hidroelectrica

1. The Current Situation

Assets designated as state public property may not be sold or included in the nominal capital of a joint-stock commercial company. Such assets include dams and reservoirs, sluices and dykes.⁶⁰ State public assets may only be granted under a concession, either for payment of royalties or for free. Land, on the other hand, may be designated as either state public property or state private property and a concession holder may include the value of the land in the nominal capital of the joint stock company. Thus, in the case of Hidroelectrica, it must be presumed to have only a concession to operate hydropower projects considered state public property.

However, it is not clear whether Hidroelectrica has any right to concede the state public property it operates to third parties. Under Art. 5 of EO 29/98, as amended by Law 99/2000, ANRE is designated as the concessionee in the electricity and heat sector. Assuming that ANRE has conceded such property to Hidroelectrica, the Methodological Norms for Application of Law 219/1998 stipulate that “public goods, activities or services under concession are forbidden to be the object of a sub-concession.” It would appear, therefore, that ANRE would need to terminate the concession granted to Hidroelectrica (if, indeed, it has granted such concession to Hidroelectrica) and put out for bid the concessions for hydropower projects to new entities.

ANRE is specifically given the tasks of organizing the bids, negotiating and executing the concession contracts, and establishing the procedures for calculating royalties to be paid under the contracts. ANRE also organizes the bids for concessions, which are granted through a process of public tender.⁶¹ Concession agreement for electricity and heat sector assets may have a term of up to 49 years with an option for automatic renewal for 24 years and six months.⁶² Concession payments or rents are property of the national or local government, depending on which is responsible for the state public property.⁶³

The Government has also recently introduced the concept of private public partnerships (PPPs) for public state property. According to this model, investors may enter into joint private/public capital ventures with Hidroelectrica for the purposes of completing

⁶⁰ Law No. 213/1998, Annex I, item 18.

⁶¹ See EO 63/1998, art. 60 *et seq.* EO 63/1998 specifically deals with concessions in the electricity and heat sector. However, there is also a law on concessions for state public property. See Law No. 219/1998. The construction and exploitation of new hydropower plants are subject to Law No. 219/1998 but existing hydroelectric power plants are not covered.

⁶² See Law No. 219/1998, art. 1(2).

⁶³ See Law No. 213/1998, Annex I, item 18.

unfinished projects and helping to rehabilitate existing ones.⁶⁴ This can be done either by using a BOT model, or by using a build, own, operate (BOO) one.⁶⁵ Production, transportation and supply companies in the energy field are authorized to enter into long-term PPAs with generating companies based on the PPP agreement, subject to the approval of ANRE and prior confirmation by the ministries involved or the local public administration, and the Government, if applicable.⁶⁶ The public authority wishing to enter into a PPP arrangement must publicly notice its intention and accept Letters of Intent for a 60-day period.⁶⁷ The public authority then enters into a “project agreement” with each of the investors that have expressed interest, specifying their rights and obligations. An expert commission appointed by the public authority is appointed to analyze the “economic, financial, technical and legal issues” involved, while the public authority prepares a feasibility study. Once negotiations have concluded, the public authority issues a list of investors, ranked by the best offer. If negotiations with the highest ranked bidder do not conclude in an agreement, the public authority may begin negotiations with the next highest ranked bidder.

Privately-owned land needed for the project may be expropriated if the project is of “national interest” and land that is privately owned by the State may be transferred free of charge to the project company. Such land, and the properties developed by the project company, may not, however, be mortgaged, pledged or encumbered for the benefit of third parties.⁶⁸

2. Areas of Concern to Potential Investors

Having ANRE be the concessionee for state public property such as dams and reservoirs puts ANRE in a clear conflict of interest. As concessionee, ANRE is acting as “quasi-owner” of the property and would be motivated to obtain the highest possible royalty payments. As regulator, ANRE would want to weigh other considerations, such quality of service deliveries, social and environmental considerations, and competence of the operator.

The PPP model proposed in the Medium-Term Energy Plan for unfinished hydropower projects is also problematic. First, under the Constitution, state public property may be exploited only through administration by *regies autonomes*, by concession or by lease. The Constitution does not explicitly allow for PPPs. Such agreements are therefore subject to challenge on constitutional grounds. Second, the selection process for the winning bidder under the PPP process is unclear and non-transparent. Third, the

⁶⁴ See Law No. 137/2002, art. 23(a)-(b).

⁶⁵ See *id.*, art. 24(1)(a)-(b).

⁶⁶ See *id.*, art. 24(2).

⁶⁷ GO 16/2002, art. 5(1)

⁶⁸ *Id.* art. 11(2).

prohibition on mortgaging or pledging the property used for the PPP means that it cannot be used as security for a bank loan. Customarily, lenders under a project finance structure will want certain assets, such as the turbines, pledged as collateral.

Finally, assuming Hidroelectrica proposes to buy all of the output of the new hydropower projects, this structure would suffer from the same defects as the Electrica and Termoelectrica PPA models.

3. Recommendations

1. The role of concessionee should be played by some other Governmental entity and not ANRE, so as to avoid any appearance of impropriety.
2. The GOR must clarify the constitutionality of the PPP scheme for public state property.
3. The selection of the successful bidders for BOT/BOO opportunities should be done by a committee of non-interested third parties, to ensure investor confidence in the selection process.
4. GO 16/2002 should be amended to allow investors to use the property to be developed as security for bank loans.

D. Public/Private Joint Ventures

1. The Current Situation

As part of the process of privatization, the Government is considering a strategy of creating of a number of generating companies which will own assets formerly owned by Termoelectrica and Hidroelectrica. These new companies will be structured so as to allow for public/private ownership. A private investor or investors will own no less than a 60% share. Termoelectrica and Hidroelectrica will be the owners of not more than a 40% share in the aggregate.

Romania's principal statute on companies, Law No. 31/1990 (as republished in 1997), will govern the rights and obligations of these new companies' shareholders, directors and officers. There is no special legal regime governing public/private ventures such as the one being contemplated, although any private investor in the electricity generating sector must evaluate specific rules such as the retention of "golden share" powers for companies declared to be of strategic control. In some cases, Law No. 31/1990's provisions operate only in the absence of otherwise controlling terms found in a company's Memorandum of Association or Articles of Association (individually and collectively, the "Org. Docs").

There are two types of shareholder meetings under Law No. 31/1990: ordinary and extraordinary.⁶⁹ Holders of voting shares are typically entitled to one vote per share

⁶⁹ See Law No. 31/1990, art. 110(1).

during a shareholder meeting, but owners of more than one share may have their votes limited if prescribed by the Org. Docs.⁷⁰ It is during an ordinary shareholder meeting that budgets are decided and directors are appointed.⁷¹ Ordinary meetings require a quorum of at least 1/2 of the total share capital to be present and decisions can only be taken with at least an absolute majority vote of the share capital present, unless a larger majority is required under the Org. Docs.⁷² In the event that a quorum cannot be achieved, a second meeting can be called requiring no quorum and only the vote of the majority present in order to take a decision.⁷³ Extraordinary meetings can be called for a number of purposes, including (a) changing the business purpose of the company; (b) increasing share capital, (c) dissolution, and (d) merger.⁷⁴ The shareholders during an extraordinary meeting may also delegate to the Board of Directors the exercise of powers to decide on changing the company's purpose, increasing or decreasing share capital, and converting bonds from one class to another, subject to the Org. Docs.⁷⁵ Unless otherwise specified under the Org. Docs, extraordinary shareholder meetings require a quorum of 3/4 of the total share capital to be present and decisions taken require the vote of 1/2 of the total share capital, not just that which is present.⁷⁶ If no quorum is achieved, a second meeting can be called requiring 1/2 of the total share capital to be present with actions taken here needing the vote of 1/3 of the total share capital.⁷⁷ In all cases, meetings must be preceded by proper notice.

As for directors, Romanian law requires that the Board chair and at least 1/2 of the directors be Romanian citizens, unless the Org. Docs provide otherwise.⁷⁸ Meetings of the Board of Directors require a quorum of at least 1/2 of the total directors, unless the Org. Docs require a larger number of directors for a quorum, and actions taken need the vote of a simple majority of the directors present.⁷⁹

⁷⁰ *See id.*, art. 101(1)-(2).

⁷¹ *See id.*, art. 111(2).

⁷² *See id.*, art. 112(1).

⁷³ *See id.*, art. 112(2).

⁷⁴ *See id.*, art. 113(a)-(l).

⁷⁵ *See id.*, art. 114.

⁷⁶ *See id.*, art. 115.

⁷⁷ *See id.*

⁷⁸ *See id.*, art. 134(3).

⁷⁹ *See id.*, art. 139.

It should be noted that the above provisions only apply to joint-stock companies, which, given the expected magnitude of the projects and variety of investors and interests is the only suitable form of corporate governance.

2. Areas of Concern to Potential Investors

Strategic private investors will look for an ability to control the management and direction of the new public/private joint ventures. Under the current proposal, as a 60% shareholder, a private investor will be able to fulfill the quorum and voting requirements by itself and take decisions without the need for Termoelectrica or Hidroelectrica's participation in an ordinary shareholder meeting. Even if a 60% shareholder is unable to meet the first quorum requirement for an extraordinary meeting, it will be able to meet the requirements for taking actions at a second shareholders meeting. In all cases, a 60% shareholder should be able to dominate any voting. A 60% shareholder will be in such a dominant position that it could select all of the directors, thereby ensuring control of the Board of Directors and its decisions.

Romanian company law in and of itself does not provide the 40% shareholders with much ability to affect shareholder or Board actions. As a matter of Romanian law, the owners of a 40% shareholder interest could only be guaranteed veto powers or Board representation if the Org. Docs provided for them. However, a strategic private investor should be aware that the Government may view these newly-formed power generators as "companies of strategic concern" similar to Termoelectrica and Hidroelectrica and may seek, to the extent it is possible, to exercise its "golden share" powers and limit the private investor's ability to undertake strategic actions with which the Government disagrees. An investor should be able to take comfort in the fact that, unlike Termoelectrica and Hidroelectrica, the Government will not be the shareholder in the new generating company itself. Instead, the Government will be the shareholder in two of the joint venture's minority partners. This may render the joint venture immune to the Government's "golden share" powers as statutorily provided for, but conceivably the Government could argue for "golden share" powers based on the underlying public policy rationale for "companies of strategic control."

3. Recommendations

1. The Org. Docs for each of the joint ventures must not limit the quorum and voting requirements favoring a 60% shareholder under Romanian company law.

2. The Org. Docs must contain at least an acknowledgement from the Government, as Termoelectrica and Hidroelectrica's 100% shareholder, that it irrevocably waives any "golden share" powers to which it may be entitled to exercise over decisions taken by the joint venture's shareholders or directors.

E. Bankruptcy and Debt Restructuring

1. The Current Situation

Termoelectrica is heavily in debt to fuel suppliers and service providers, while both Termoelectrica and Hidroelectrica are in arrears with regard to paying taxes, pension fund contributions and other social payments. They are therefore targets for involuntary bankruptcy by creditors.

Romania's primary law on bankruptcy allows for both reorganization⁸⁰ and liquidation⁸¹ of companies. A court with jurisdiction over the debtor has exclusive competence to hear matters concerning bankruptcy.⁸² Creditors⁸³ and a trustee⁸⁴ have key roles in adjudicating a bankruptcy and the rights, obligations and protections of each of the creditors and the debtor are set forth with particularity.⁸⁵

In the context of accelerating privatization, any voluntary liquidation of companies in which the state is a majority shareholder is subject to the provisions of EO 88/1997. Liquidation shall be proceeded by notice to creditors, a liquidator shall be appointed to oversee the process, the assets will be sold to the highest bidder,⁸⁶ and the liquidator shall manage distribution of the proceeds to the creditors.⁸⁷

2. Areas of Concern to Potential Investors

Involuntary bankruptcies with forced asset sales have been a problem in some emerging markets, particularly where there has been collusion between bankruptcy court judges and "vulture" creditors.⁸⁸ Investors may be concerned that, if they are not able to restructure the company's debt prior to privatization, the debts could be acquired by

⁸⁰ See Law No. 64/1995, section 5 *et seq.*

⁸¹ See *id.*, section 6 *et seq.*

⁸² See *id.*, section 1 *et seq.*

⁸³ See *id.*, section 3 *et seq.*

⁸⁴ See *id.*, section 4 *et seq.*

⁸⁵ See generally, Law No. 64/1995.

⁸⁶ See Law 137/2002, chapter VI.

⁸⁷ See *id.*.

⁸⁸ This has been true in Russia and Ukraine. Last year, a "vulture creditor" which was able to buy up accounts receivable at a discount from face value, foreclosed on Donbasenergo, a Ukrainian regional power producer, and stripped out certain assets.

unscrupulous creditors in order to acquire assets that have been rehabilitated by the strategic investors.

3. Recommendations

1. The debts carried by the companies to be privatized should be restructured prior to seeking direct foreign investment. In Ukraine, for example, debts owed by state-owned distribution companies (which were being privatized) to other state-owned entities, were offset against debts owed by the state towards the distribution companies. The new buyers were given a five-year period within which to repay any outstanding debt that still remained after the offsets had taken place, and were given a “grace period” for the first two years following privatization, during which time they did not have to repay anything. A similar solution may be called for in Romania if debts cannot be fully restructured before privatization.

F. Environmental Laws

1. The Current Situation

In the event of a share sale in which a buyer acquires control of the company, or in the event of a sale of an asset, the company to be sold must prepare an environmental report that sets forth the company’s environmental liabilities.⁸⁹ Based on this report, the public institution responsible for the sale must include environmental liabilities in the presentation file or prospectus.⁹⁰ The public institution is required to compensate the buyer or the company up to the level of the purchase price for remediation costs incurred for environmental problems not previously disclosed.⁹¹ The state guarantees payments of these damages.⁹² In an asset sale, the company (but not the public institution) is obliged to pay the buyer for damages incurred if the buyer is required to remedy environmental obligations which were not disclosed in the presentation file of the asset.⁹³ The indemnity for non-disclosure of environmental liabilities and all other obligations, however, is limited to one half of the purchase price of the shares.

2. Areas of Concern to Potential Investors

As noted above, the obligation to indemnify investors against non-disclosed liabilities is meaningless where the sale price of the shares is one Euro. Even if the share price is set at market value, setting the cap on indemnification for all violations of representations

⁸⁹ See EO 88/1997, art. 31(1).

⁹⁰ See **Law 137/2002**, art. 13

⁹¹ See *id.*, art. 27.

⁹² See *id.*, art. 30(2)

⁹³ See EO 88/1997., art. 31(6).

and warranties at one half of the purchase price undermines the value of the indemnification and makes it difficult to use privatization methods which require investment commitments. Since capital contributions would not be used in the calculation of compensation awards, investors will be reluctant to make such investment commitments.

Moreover, in a BOO situation involving a “brownfield” project, where the developer buys land and partially completed assets, there is no indemnification by the public institution (in this case MIR) in the event of a misrepresentation of environmental liabilities. If the BOO transaction is preceded by the creation of a new single-purpose entity, which walls off Hidroelectrica from liability, then the “company” responsible for reimbursing the private investor would be the single purpose entity. The only contribution that the Government plans to make to such entity is the half-completed hydropower plant, which means the investor would be compensating itself for the environmental liability. The indemnification provision is therefore meaningless, unless it is guaranteed in some measure by a creditworthy entity.

Moreover, in the past, even when the Government did have to guarantee the disclosure obligation, there have been reports that the Government has tried to get buyers to waive their right to indemnification. Investors strive to make informed decisions to minimize their financial exposure. Given the uncertainties surrounding environmental liabilities, investors are likely to heavily discount the value of the assets or shares being purchased.

3. Recommendations

1. The indemnification cap should be set at a dollar amount, regardless of the purchase price paid, so that investors will not be discouraged from making investment commitments. Even if the purchase price is denominated in lei, because of inflation, the indemnification should be established in U.S. or other stable currency.
2. The obligation of the State institution to compensate investors for damages incurred due to non-disclosure of environmental liabilities – and the Government’s guarantee of that obligation – should be extended to the sale of both shares and assets.
3. Efforts by Government officials to circumvent the indemnity the Government provides must be severely penalized and the Government should ensure timely and full disclosure of known environmental conditions by imposing more clear [there are some]penalties on company officials who fail to disclose environmental contamination.
4. The Government must be willing to agree to international arbitration in the event of a dispute over what was or was not disclosed in order to make the indemnification provision an attractive risk mitigation measure.

G. Employment Laws

1. The Current Situation

The rules governing Romania's labor market form an important element of the legal regime within which an investor must operate. Labor protections are extensive. Newly privatized companies are limited in their abilities to renegotiate existing labor contracts. Individual dismissals can only be for reasons involving the employee or for economic reasons.⁹⁴ Reasons involving the employee are (i) serious or repeated breaches of work rules, (ii) mental or physical inability as determined by experts that preclude the employee from performing his job, (iii) being unqualified, (iv) retirement with pension, once eligibility requirements are met, or (v) arrest for a period greater than 60 days.⁹⁵ In such cases, the employer must follow all procedures such as notice to the employee and informing the employee of the cause and what court of law has jurisdiction to hear a challenge to the dismissal.⁹⁶ Failure to follow such procedures invalidates the dismissal.⁹⁷

Layoffs due to economic reasons must be due to "economic difficulties, technology transformations or reorganization of the employer." Collective layoffs may only occur for economic reasons. In the event of collective layoffs stemming from a privatization and restructuring, employee's compensation rights shall be paid from the unemployment fund and included in retraining and reemployment schemes.⁹⁸

2. Areas of Concern to Potential Investors

Labor costs will be of particular concern to investors because of the history of labor unrest in Romania. Economic layoffs, both individual and collective, require the employer to propose a plan of social measures and vocational training for affected employees and propose a reassignment of workers to other units, if such a reassignment is possible.⁹⁹ Even if an employer can put together a plan in accordance with the labor protection regulations, unions and other labor representative committees are entitled to propose measures to avoid lay-offs. While it appears the employer can disregard the unions' alternative proposals, it does so at the risk of the lay-offs being contested in the court which the employer is required to advise is the proper forum for a challenge.

⁹⁴ See Labor Code, chapter 6

⁹⁵ See *id.*, art. 130

⁹⁶ See *id.*, art. 134

⁹⁷ See *id.*, art. 134, as interpreted by courts and doctrine

⁹⁸ See EO 88/1997, art. 32(6)

⁹⁹ See **Labor Code.**, art. 133

An investor may be faced with the prospect of lengthy and costly court battles, particularly in the context of a privatization leading to lay-offs. If a court finds a lay-off illegal, it can order the employer to pay affected employees the salary during the time that has elapsed from the lay-off until the court's decision, as well as punitive damages. The court may even require that the employer rehire the employee, if "objectively possible."

3. Recommendations

1. A portion of the proceeds from the sale of shares or assets should be made available to provide for retraining or retirement benefits for workers affected by privatization of the generation assets.
2. Potential investors should also be made aware of the extent of their labor cost obligations prior to submitting their bids. For example, tender documents could provide bidders with options for mitigating social impacts of privatization, with associated costs for each option. Otherwise investors are likely to overestimate the cost impact of reductions in the work force and reduce their bids by more than necessary.
3. A greater role for arbitration in the privatization context should also be encouraged, with appeal to courts only under limited circumstances.

H. Property Laws

1. The Current Situation

Romania's Constitution provides for the protection of private property.¹⁰⁰ However, expropriation is allowed in cases of "public utility" so long as it is established according to law and owners receive just compensation in advance, with such compensation being subject to the owner's agreement.¹⁰¹ If the land is classified as belonging to state public property, the land may be used by a privatized company or company to be privatized under a concession.¹⁰²

State public property is inalienable. While such assets may not be sold, they may be administered by self-managed public companies or public institutions, or may be leased or granted in concession, in accordance with the law. The type of property which constitutes state public property is expressly set forth in the Romanian Constitution: mineral and other subsoil wealth, means of communication, airspace, waters capable of

¹⁰⁰ See ROM. CONST., art. 41. While foreigners may not own land, they may own a 100% interest in a Romanian legal entity which may in turn own land.[CITE].

¹⁰¹ See *id.*, art. 41(3).

¹⁰² See Law No. 213/1998, art. 11. While in most cases, Law No. 219/1998 on the concession regime governs the terms and conditions of concessions, EO 88/1997 shall govern the methods, documentation and procedures used in concluding the concession in the context of a privatization that falls under the EO 88/1997, as amended.

being utilized for hydropower and other public interests, beaches, territorial waters and natural resources of the economic zone and continental shelf are exclusively state public property, as well as property so designated by law.¹⁰³ Relevant to the energy sector, Law No. 213/1998 includes the electricity transportation network as state public property.¹⁰⁴ The state private property domain is relatively straightforward; any state assets not otherwise constituting state public property are by default state private assets.¹⁰⁵

The key distinction to be made between state private property and state public property, as noted above, is that the former is able to be sold, leased or made subject to a concession whereas the latter may only be leased or conceded. Termoelectrica and Hidroelectrica possess substantively different assets. Termoelectrica's assets are generating assets not otherwise designated as state public property, and therefore able to be sold.¹⁰⁶ However, those heating assets recently transferred to the municipalities have been placed in the local public domain and are therefore considered as state public property. In order for them to be sold, they must be affirmatively placed back into the state private domain by the municipalities.

In the event that a privatized company or company under privatization procedures suffers damages because the property was previously nationalized and a restitution claim by the former owner is granted, the public institutions involved must pay court-determined or agreed upon compensation to the private investor for damages incurred, not to exceed 50% of the price paid by the investors for the company's shares.¹⁰⁷

2. Areas of Concern to Potential Investors

An investor will want clear title to the land underlying the generating assets owned by the company in which it is buying shares. Title to the land associated with the property owned by Termoelectrica or by Hidroelectrica (such as the half-finished hydropower projects) is uncertain because of improper title registries and improper title transfers. In many cases, the boundaries of properties are not known with certainty and it may be difficult to determine what parcels of land are owned by the company being privatized.

An additional problem is that, in some instances, former landowners who were dispossessed during the Communist regime have made claims to the property. Investors will therefore want to be indemnified against restitution claims. The indemnification provided under Law No. 137/2002 repealed key protections in EO 88/1997 against a

¹⁰³ See ROM. CONST., art. 135.

¹⁰⁴ See Law No. 213/1998, Annex I, EO 63/1998, art. 12 (identifying transmission assets)

¹⁰⁵ See *id.*, art 4.

¹⁰⁶ See *id.*, art 4 .

¹⁰⁷ See Law No. 137/2002, art. 30(1).

return of property to former owners where such return would have the effect of interfering with a company's activities to such extent that the restitution would cause a dissolution and force a liquidation.¹⁰⁸ As a result of the repeal, the maximum compensation that an investor can receive in the event of a restitution claim is half of what it paid for the company's shares.¹⁰⁹ Moreover, it is not clear that the indemnity would be applicable to asset sales.¹¹⁰

In addition, the on-going dispersal of a number of Termoelectrica's combined heat and power assets to the local public authorities portends difficulties. Should some of the local authorities refuse to take the assets, they would remain with Termoelectrica but would need to be re-designated as state private property before they could be acquired by a private investor.

3. Recommendations

1. A strong indemnity provision for damages that investors incur because of unclear title to land parcels or because of restitution of property should be re-introduced into Romania law. As noted above, the indemnity should be set at a dollar amount, rather than at half the purchase price.
2. All generating assets must be designated state private property and the sale of these assets governed consistently with the terms of EO 88/1997, Law No. 137/2002 and other relevant legislation.

III. The Regulatory Framework

A. ANRE's Tariff Authority.

1. The Current Situation

The regulation of tariffs for the electricity and heat sectors lies within the competence of ANRE, which was established by EO 29/1998, as approved by Law No. 99/2000 and amended by Law No. 789/2001. Its goal is "to create and implement fair and independent regulations to ensure an efficient, transparent and stable functioning of the electricity and heat sector and market while protecting the interests of consumers and investors."¹¹¹ Currently 33% of the retail market is open to competition, although only a small percentage of eligible customers have actually elected to switch to a negotiated bilateral supply contract. For the remaining market, prices are regulated by ANRE, based

¹⁰⁸ See *id.*, art. 56(1) (repealing EO 88/1997, art. 32⁴.)

¹⁰⁹ See Law No. 137/2002, art. 30(1).

¹¹⁰ See *id.*

¹¹¹ ANRE Annual Report: 2000 (visited April 23, 2002) <<http://www.anre.ro/engleza/AnnualReport2000.html>>.

upon proposals submitted by generation, transmission and distribution companies.¹¹² The regulated tariffs are supposed to reflect a number of goals, among them: (a) contributing to efficient use of energy; (b) allowing the consumer to choose from the types of electricity pricing suited to its needs; (c) stimulating electricity and heat supply at the lowest prices; (d) protecting consumer interests; (e) insuring service quality; and (f) promoting competition in energy and fuel trading.¹¹³ The result, however, is a complex and often confusing web of tariffs.

2. Areas of Concern to Potential Investors

Investors--whether their purchases have been paid for through project financing or balance-sheet financing--will rely on the tariffs applicable to the sale of their power for recovery of, and return on, their investment. Unfortunately, tariff levels currently do not cover the full cost of production for all generating units owned by Termoelectrica. Termoelectrica has therefore been forced to borrow money in the private market to pay for imported fuel (primarily oil and gas). Despite this fact, customer arrears are large and there are long delays in paying bills. State-owned companies are among the poorest payers and their non-payment has the greatest impact on Termoelectrica's ability to pay its suppliers.

Another area of concern for investors will be adherence to and respect for the formal decision-making procedures set up for ANRE and respect by the Government of the outcomes of such procedures. The Government (through MIR) has shown some predilection for disregarding ANRE's powers to set and approve regulated tariffs under Article 41 of EO 63/1998, even when it has no legal power to act. Illustrative of this was the Government's declaration in early 2001 that there would be no tariff increases after ANRE recommended an increase in tariffs of 10.7% based on the proposals submitted by Termoelectrica, Hidroelectrica, and Nuclearelectrica. Subsequently, and on its own, MIR announced a 6.1% tariff increase in April 2001, an amount so low that the proposed tariff would not even be enough to pay for fuel costs. Moreover, the April 2001 increase represented a disregard for the normal procedure for requesting tariff increases, as ANRE had not received any request for tariff increases from energy producers that led to the April tariff increase.

The episode above underscores a final concern for investors, especially those wishing to enter into a competitive market: Romania's low tariff levels. At a practical level, the competitive market remains tiny because the regulated tariffs are so low that eligible customers have no incentive to switch suppliers. Thus, the regulated tariff has been allowed to both undermine the economically rational intent of the tariff as well as the development of a competitive market for electricity. Added to this structural obstacle, MIR's influence over ANRE pursuant to Law No. 789/2001 has undermined the

¹¹² See EO 63/98, art. 39(1).

¹¹³ See *id.*, art. 39(2)(a)-(m).

exclusive powers of ANRE to review regulated tariffs based upon the producers' proposals under Article 41(1) of EO 63/1998.

Investors also look to see if the policies enshrined in legislation send efficient price signals. The goals of building competition in generation and supply of electricity and stimulating private sector participation are undermined by the current uniform national tariffs for "captive" electricity consumers under Article 37 of EO 63/1998. Investors will likely view this policy as problematic since the costs of producing and transporting heat or electricity vary due to different locations, plant efficiencies and fuel type. Absent appropriate signals, decisions on plant investments and location will not be efficient.

Finally, delegation to the local public authorities of some of ANRE's license-granting powers with respect to heat generating plants may also create problems, since many of the plants remaining in Termoelectrica's portfolio continue to have heat production associated with them. In the event such plants are subject to licenses granted by the local public authorities, investors will be concerned about the possibility of the inconsistent application of licensing rules and regulations. EO 63/1998 also does not include a procedure by which a license-seeker or holder may challenge before ANRE an adverse decision by the local public authority if it fails to follow ANRE's regulations.

3. Recommendations

1. ANRE should develop a tariff methodology which recognizes the need to compensate investors for capital improvements and allows them to earn a fair rate of return on their investments. Such methodology should be prepared and approved prior to the sale of the shares or assets. This approach was used successfully in Ukraine and was the decisive factor in obtaining the participation of strategic investors in the distribution sector privatizations.

2. ANRE should establish an administrative procedure that a license-seeker or holder can rely upon to challenge decisions made by the local public authorities which the license-seeker or holder believes was improper.

B. ANRE Independence

1. The Current Situation

ANRE's competences include setting tariffs, issuing and withdrawing licenses, developing regulations, surveying competition, ensuring environment compliance and developing labor standards in energy field.¹¹⁴ In 2000 ANRE issued 156 licenses, 509 orders and decisions regarding tariffs and pricing, 32 decisions on contractual disputes and 19 licenses for eligible consumers to purchase electricity on the newly-opened market.

¹¹⁴ See *id.*, art. 69.

ANRE is managed by a President and Vice President, each of whom is nominated and dismissed by the Prime Minister upon the proposal of the Minister of Industry and Resources.¹¹⁵ The total number of members of ANRE is five, with the other three ANRE members being appointed by MIR.¹¹⁶ All ANRE orders and decisions are adopted with a majority vote.¹¹⁷ Assisting ANRE is a Consulting Council of nine members appointed by MIR of which three must be from MIR entities, one must be from the Energy Professional Associations, one from the trade unions, one from the local public administration, one a research-design specialist in the energy sector, and two members from large consumers of electricity and heat.¹¹⁸ In an attempt to keep its activity independent, ANRE is funded out of both the tariffs it regulates and the fees it receives from issuing licenses.¹¹⁹

2. Areas of Concern to Potential Investors

The Government's policy with regard to ANRE's status as an independent agency will be particularly troublesome to potential investors. While ANRE's budgetary autonomy provides some independence from Government control, the strong role given to MIR in selecting and dismissing ANRE members has severely compromised the agency's independence, a fact highlighted in a recent, anonymous survey taken of ANRE members.¹²⁰ ANRE was set up originally under the "coordination of" MIR.¹²¹ In 1998, it was ostensibly made an "autonomous authority"¹²² but at the end of 2001, it was again put under the direct control of MIR. A regulatory agency's independence from political influence is of paramount importance to a strategic investor and MIR's control over tariffs will be a decided disincentive to private investment.

¹¹⁵ See Law No. 789/2001, art. 1(5).

¹¹⁶ See *id.* art. 1(6).

¹¹⁷ See *id.*

¹¹⁸ See *id.*

¹¹⁹ See *id.*

¹²⁰ The survey asked ANRE members themselves to evaluate themselves ANRE's independence. While all 14 respondents agreed that ANRE met the criteria of budgetary independence, only 6 believed that ANRE is independent from undue influences by parties with an interest in the outcome of ANRE proceedings. Only 4 believed that the regulators are protected from arbitrary dismissal during the terms for which they are appointed. *ANRE Best Practices Survey* (May 2002) (on file with authors).

¹²¹ EO 29/1998, art. 4.

¹²² *Id.*, 63/1998, art. 69(1).

3. Recommendations

1. ANRE's independence should be restored by legislation and MIR's influence over ANRE should be curtailed. MIR should have only a limited role in recommending the appointment of the members of ANRE, and it should not be able to dismiss them except for reasons of moral turpitude.
2. ANRE should be given the authority to put tariff increases and decreases into effect without the approval of the MIR. Any appeals from such tariff increases should be through normal court procedures, not to MIR.

C. ANRE's Licensing Authority

1. The Current Situation

As noted above, the authority to issue licenses and authorizations in the energy sector rests with ANRE¹²³ and it has issued licenses to both Termoelectrica and Hidroelectrica. Licenses may only be suspended or withdrawn under circumstances where the license holder has failed to observe the conditions attached to the license and only after ANRE has taken all required steps precedent to the suspension or withdrawal outlined in Article 57 of EO 63/1998. ANRE may also choose to delegate its licensing powers with respect to local heat generating assets, provided that they fulfill that task in accordance with the EO and the regulations issued by ANRE.¹²⁴

In addition to issuing a license for commercial operation of heat and electricity generating assets, ANRE also issues other types of authorizations, including "setting up authorizations" for constructing new energy capacity and rehabilitating and refurbishing existing energy capacity; commissioning authorizations for power and thermal power stations; and operating authorizations for electricity and heat power stations.¹²⁵ Changing the fuel for which a generation plant was originally designed also requires ANRE approval.¹²⁶

2. Areas of Concern to Potential Investors

While the requirement to obtain Government authorization for construction of new power plants is a standard requirement in virtually all countries, the number of separate authorizations required at different points in time during the construction process appears burdensome and could be troublesome to strategic investors. Each stage of the

¹²³ See *id.*, art. 46(1)(1)-(4).

¹²⁴ See EO 63/1998, art. 72(1).

¹²⁵ *Id.*, art. 46.

¹²⁶ *Id.*, art. 7(h).

authorization process could be used to impose additional conditions, making it impossible to determine the cost of a new plant at the outset.

It is also unclear whether all new capacity is subject to a Government tender process or whether an investor can simply choose to construct a new independent power plant, based on negotiating a PPA with an industrial customer. Strategic investors may wish to have the option of building new capacity rather than rehabilitating existing older plants. It may be more efficient economically to allow investors to shut down old inefficient polluting plants and build a new one, than to refurbish and repair it. Private investors making the choice of where to invest their capital are in the best position to make such decision.

Finally, the restriction on being able to switch fuels limits investors' ability to improve plant efficiency and save costs, which contradicts the Government's state objectives in the Energy Strategy. If power plant operators are required to abide by environmental laws, they should be able to choose to comply with such laws by using less polluting fuels with higher caloric value.

3. Recommendations

1. EO 63/1998 should be clarified to permit ANRE to streamline the licensing and authorization process, as well as the permitting process for new power plants and for the refurbishment of existing plants.
2. The Government should clarify its policy on liberalized entry into the power generation market of new players and allow private investors the choice of whether to refurbish existing capacity or shut it down and build new capacity.
3. The restriction on switching fuels should be eliminated.

D. Import/Export Regulations

1. The Current Situation

One of Romania's goals is to restructure the electricity sector to enable it to increase exports of electricity to consumers abroad. Romania's transmission network is already interconnected with the transmission networks of Ukraine, Serbia and Montenegro, Bulgaria, Hungary and Moldova. A 750 kV line connects to both Ukraine and Bulgaria, a 400 kV and 110 kV line connects to Serbia and Montenegro, another 400 kV and a 220 kV line connects to Bulgaria, a 400 kV line connects to Hungary, and a 110 kV line connects to Moldova.

A 400 kV connecting Romania and Hungary is planned.¹²⁷ However, technical issues related to interconnection must be resolved before electricity can be efficiently exported

¹²⁷ See REGIONAL MARKETS WORKING GROUP, ASPECTS REGARDING THE DEVELOPMENT OF REGIONAL ELECTRICITY MARKETS 4 (Licensing/Competition Committee Working Papers, 5th Annual Regional Energy Regulatory Conference for

to a larger market. Romania is not fully integrated into the European power network, the Union for the Coordination of Transmission of Electricity (UCTE); however, a one-year test interconnection is currently underway. Pending the results of this testing and monitoring period, UCTE connection is planned for 2003. In addition, there appears to be a problem of congestion at interconnection points in the northwest of the country, the most direct route into UCTE countries.

While the physical ability to export and import electricity is being upgraded, some of the laws and regulations needed for such activity to be carried out have already been promulgated. The transmission network operator must ensure that access to the network for import/export activities be provided to any domestic applicant that fulfills the requirements of EO 63/1998.¹²⁸ Regulation over the import and export of electricity falls within ANRE's competences,¹²⁹ and ANRE's tasks include issuing regulations with respect to tariffs and electricity and heat contracts and issuing, refusing, suspending or withdrawing licenses in general.¹³⁰

In the absence of a functioning regional electricity market, the rules needed for exports to a larger electricity market are of a framework nature. Eligible exporters of electricity are planned to be domestic producers of electricity such as Termoelectrica and Hidroelectrica, as well as independent producers.¹³¹ In order to export, a state-owned Romanian producer must first offer sufficient power to satisfy its obligations for domestic consumption. However, it appears that an independent power producer faces no prohibition against exporting as long as it has a license to operate in the Romanian market and pays the required charges and fees.¹³²

Central/Eastern Europe & Eurasia, sponsored by the Energy Requestors Regional Association December 3-5, 2001).

¹²⁸ See EO 63/1998, arts. 13(1); 13(2)(c).

¹²⁹ See EO 63/1998, art. 69(2)(j).

¹³⁰ See *id.*, art. 70(a)-(b).

¹³¹ See Maria Mănicuță, Regional Electricity Trade - Current Developments, Presentation Before the Energy Regulators Regional Association at the 5th Annual Regulatory Conference, (Dec. 4, 2001) <www.erranet.org/library/presentations/Manicuta%20Regional%20Electricity%20Trade%20eng.ppt>. Transelectrica is prohibited from buying and selling electricity, other than to cover for losses on the transmission grid. See *id.*

¹³² See www.erranet.org/library/licensing/Romania%201%20questionnaire%202001%20.doc. EO 63/1998 is not explicitly clear about whether licensing allows for the ability to export to other markets besides Romania. See EO 63/1998, art. 70(f).

2. Areas of Concern to Potential Investors

Investors looking to engage in immediate export activity will need to examine both the technical ability of the transmission network to effectively connect to consumers outside of Romania and the ability to compete on price in the target markets. Romania's current UCTE test interconnection will prove helpful with regard to the technical issues; the price issue will depend in part on whether the regulatory framework imposes additional costs on exports that are not applicable to domestic power sales. In addition, potential investors will want to be assured that there are no restrictions on, or discriminatory treatment of, cross-border transactions as between Government-owned exporters and private exporters. Finally, the ability of foreign power producers to compete in the Romanian market for Romanian customers will also be of interest to potential investors.

EO 63/1998, while ensuring access to the transmission network for import/export activities, does not address cross-border tariffs and ANRE's enforcement powers, if any, with respect to them. Licensing rules appear to be written more in anticipation of the national energy market than a regional market. However, while some of these issues must be addressed in the Romanian context, a number of them will also need to be resolved on a regional or international level.¹³³

3. Recommendations

1. The Government should clarify its export/import policies as soon as possible. Given the possibility that Romania may have excess generating capacity, exports may give Romania an advantage in attracting potential investors over other countries in the region seeking to sell an interest in their energy sector assets; however, this will only hold true if investors know the applicable rules.

¹³³ The countries of the European Union, let alone Romania and its neighbors, are still developing pricing and interconnection management rules for an integrated electricity market. See REGIONAL MARKETS WORKING GROUP, *supra*, note 1.

SECTION III

Overview of Alternative Privatization Methods and their Potential Application to the Romanian Generation Sector

I. Introduction

USAID's task-specific objective is to accelerate the restructuring of Romania's energy sector and to promote a competitive market for energy. Its strategic objective is to assist Romania in achieving an economically sustainable and environmentally sound energy sector. Privatization of Romania's energy generating assets is a logical step in the restructuring effort. The intent of privatization is to achieve the following goals:

- Progress towards EU accession in environmental compliance, restructuring and market liberalization.
- Introduce competition to the sector and encourage greater operating efficiency.
- Expand the reliability of electricity services to the people of Romania while lowering the cost of those services.
- Introduce new investment capital to the sector.
- Generate revenue for the State Treasury.

II. Overview

Governments throughout Eastern Europe and other emerging markets have attempted to privatize generation assets through several methods over the past ten years. These methods typically focus on either extending operating rights to manage generation facilities to experienced strategic bidders or on outright sales of stock or assets. The latter has been most successful at generating cash bids and investment capital to modernize outdated facilities. The Hunton & Williams team has evaluated approximately 175 completed energy sector privatization transactions in emerging markets since 1992 to develop our summary of potential methods that could be applicable for the Romanian sector. We have identified the most commonly used methodologies as the following:

- Concessions
- BOT or BOO Contracts
- Outright sales or tenders of assets
 - Auctions
 - Capitalization of generation enterprises combined with a public flotation
 - De-monopolization of generation enterprises followed by a trade sale
 - Trade sale combined with minimum capital investments

- Trade sale combined with pension fund reinvestments

In many countries, a hybrid or combination of several of the above methods was used based on the operational viability of the generation enterprises and political realities at the time of privatization. The sections to follow will summarize each of these methods in detail and review their suitability to privatization in Romania.

A. Concessions Method

Under the concessions model, the government retains ownership of the assets and retains all rights and liabilities of the assets, while transferring operating control to the owner of the concession. The owner of the concession has operating control for a predetermined period, during which they retain a share of the profits as their return for successful management of the generation company. Concessions are occasionally accompanied by incentives from the government including supply contracts and sales guarantees to attract investors.

1. Case Study in Brazil

Under its Ten-Year Power Expansion Program (2000-2009), the Brazilian government called for the development of 45,000 megawatts of additional generating capacity by 2009 in response to projected increases in market demand. As background to this program, most of the country's energy producing facilities had not received sufficient capital investments for an extended period and were not sufficient for meeting the expected growth in the country's power needs for the future. Brazil implemented the concession model in order to build new generation capacity and combined the concessions approach with selected trade sales and auctions of existing generation facilities. Unlike most countries, Brazil's energy sector is dominated by hydroelectric plants, which provide 70% of Brazilian electricity consumed. While the country took advantage of abundant hydro resources, most of the major dam sites in the South and Southeast, near large consumer centers, had already been developed and new facilities (mainly thermo) needed to be constructed to meet future energy requirements. Many Brazilian generation plants were controlled by state or municipal government agencies rather than at the national government level, which determined the privatization policy and broader strategies. Consequently, many of the decisions regarding the timing and structure of new power plant developments were made locally before being approved by the federal government.

Due to the efficiencies gained by building new energy generating plants as compared to upgrading existing plants, investors searched for methods of financing the construction and operation of new energy generating assets. The Brazilian government offered concessions to construct new facilities, financed by both government and private sector funding, including the Brazilian Development Bank.

Recently, the government has been more active in selling majority shares of existing power plants through auctions and trade sales and appears to be shifting away from the concession model. Only three new power generation concessions have been issued since 1999. The Brazilian federal government determined that concession proceeds were not

generating sufficient capital to fund modernization and upgrades of older facilities. Also, deteriorating economic conditions and political uncertainty in the broader Brazilian market have decreased investor interest in new generation projects.

2. Concession Method Structures

Concession structures typically begin with the preparation of a feasibility study sponsored by the government and often included multiple facilities bundled under a single concession contract. This study is provided to the public before the government extends invitations for bids on a particular project. The most attractive bid, based on a set of publicly listed qualifications, is then selected. A consortium of international energy companies and domestic investors or energy participants has often submitted the winning bid. Winning investors must raise the necessary capital to build or upgrade a generation facility and ultimately complete the project. This requirement necessitates the availability of sufficient debt and equity sources on the local market to provide financing for investors. Brazil has a well-developed capital market, supported by several western banks, private equity sources, and experienced project finance groups. All of these sources have played a major role in facilitating the success of Brazilian power concessions and privatization investments.

Once a new facility is operational, the investor or consortium that owns the concession has complete operating control over day-to-day decisions. The operator retains profits during the contract period, and the government retains the liabilities and rights associated with the assets.

In select situations, concessions were granted for a maximum of 35 years, with one renewal period matching the length of the original contract. However, most concessions were for 25 years. For new and existing facilities, the Brazilian government auctioned off concessions to operate facilities for “as long as necessary to generate a return on the investment.” The projected internal rates of return (IRR) on concessions offered by Brazil ranged from 20% to 25% with the actual returns yet to be quantified. The Brazilian government has offered long term supply agreements between generators and distributors as part of the concessions to neutralize some of the risk associated with operating the plants and to motivate investors to make capital investments without retaining ownership of the assets.

3. Concession Method Successes and Drawbacks

The concessions model in Brazil achieved several notable achievements by 1999. Brazil has sold concessions to operate approximately 15% of the country’s current generation capacity (approximately 65,000 megawatts) to a variety of foreign and domestic investors. Major investors attracted to Brazil through the concessions model have included Tractabel, Duke Energy, AES, and Endesa SA.

The concessions model has certain advantages for various stakeholders. First, government agencies retain ownership of energy assets, which may be politically more favorable than transferring majority ownership stakes to private investors. The

generation company can potentially receive funding to complete new construction or project upgrades by introducing western investors and partners to the financing picture. The concession holder injects new management skills and know-how into the company that usually yield new efficiencies. Several facilities or contracts can be bundled under a single concession contract, which can accelerate the privatization process. The bundling effect allows the government to package a variety of assets that will be attractive to investors in terms of investment size and asset composition.

Brazil's efforts to privatize existing facilities that require modernization or upgrades through concession contracts have yielded mixed results. Concessions were more successfully used in Brazil as an incentive to build new facilities, rather than to attract investors to buy into older or less-competitive generation companies. Under the concessions model, investors will typically commit to more limited investments rather than major plant rehabilitations or upgrades. Investors receive operating control and can make immediate job cuts, rather than offering employment guarantees. In addition, large amounts of capital to modernize outdated facilities are often not raised through concession contracts, as investors are hesitant to make major financial commitments to energy generating assets they do not own. These results underscore some of the weaknesses in the concession method that would apply in other countries.

4. Best Practices from the Concession Method

Concessions have been more successful in developing new generation facilities than in privatizing existing enterprises. A typical concession structure allows the investor to own and operate the facility for at least 25 years, which is the amount of time required for the investor to generate a sufficient return on capital on a new plant. In the case study provided, Brazil was able to generate a significant level of interest from major foreign investors during the mid-1990s, while the Brazilian economic and political situation were relatively stable.

The Brazilian government appears to have shifted away from the concessions model due to investor's reluctance to invest the large amounts of capital needed to modernize outdated facilities. Investors are hesitant to commit large amounts of capital to energy generating assets that they ultimately do not own.

5. Lessons Learned for Romania

- Concessions will likely be more successful on new projects rather than on generating investment capital to restructure existing facilities.
- Standard concession contracts are 25-35 years, frequently with an option to renew the contract for the same period.
- Without an ownership position investors are more reluctant to invest large amounts of capital.

B. BOT and BOO Contract Method

The BOT model has been created to encourage foreign investment to build and productively operate public assets pertaining to necessary infrastructure, including power generation facilities. BOT contracts allow a host government to license a private sector partner to operate a generation or distribution facility for a predetermined number of years and retain all of the profits from operation. After the term of the contract, ownership in the asset reverts back to the host government. BOT contracts introduce a certain level of competition to the market, as well as new technologies, productive management, and new capital. The model was created during the 1980's. BOT contracts differ from concessions in that the owner/operator assumes all rights and liabilities associated with property ownership during the contract period.

1. Case Study in Turkey

This model was used in Turkey during the mid-1990s in order to address that country's need to add significant levels of new electricity generation capacity in order to address projected market demands. Turkey was also heavily dependent on imported raw materials (oil, gas, coal) and developed its BOT plan to encourage foreign investors to build new hydro generation facilities. At the time of establishing BOT laws, Turkey's energy sector was state-owned and controlled by a single entity that held all generation, transmission, and distribution assets. Annual GDP growth was expected to average at least 5% per year, and the country was attempting to add up to 40,000 new megawatts of generation capacity by 2010. Private investment in the energy sector had historically been low for several reasons, including high domestic inflation, restrictive energy regulatory conditions, and lack of competition. The objectives of the Turkish government in formulating BOT laws included the following goals:

- Develop new hydro power generation capacity
- Access new capital to upgrade outdated facilities
- Improve environmental standards within the overall sector
- Increase availability of affordable electricity to its citizenry
- Create a competitive electricity generation market over time

In addition to BOT and BOO contracts, Turkish law allowed for development of Transfers of Operating Rights ("TOOR") on existing facilities, outright sales of existing generation assets to domestic or foreign investors, and generation combined with resale of excess power by major domestic industrial users ("autoproduction model"). All of these strategies were part of a broader goal of transferring a large percentage of power generation capacity to the private sector.

2. BOT Contract Structures

BOT contract structures in Turkey typically began with the preparation of a feasibility study sponsored by the Turkish government. This study is provided to the public prior to government invitations for bids on the particular project. The most attractive bid, based

on a set of publicly listed qualifications, is then selected. A consortium of international energy companies and domestic investors or energy participants often submitted the winning bid on Turkish BOT projects. Winning investors raise the necessary capital to build or upgrade a generation facility and ultimately complete the project. Turkey provided sovereign guarantees on the external financing necessary for the construction of every BOT project that has been completed to date.

Once a facility is operating, the investor or consortium has all operating control and makes all decisions. The consortium, typically backed by government guarantees, contributes new investment capital. The Turkish government had no authority to review investment decisions made by the consortium during the contract term. BOT contracts in Turkey were typically structured for 25 – 30 years, with a renewal contract option for the same period thereafter. Under no circumstances could the consortium or foreign partner own the facility for longer than 99 years. After the contract period, ownership and responsibility for the generation facility would transfer back to the host government.

Turkey offered various incentives to attract investors to BOT contracts, which were established over several years. The primary incentives offered to foreign investors under the BOT model included customs duties and fund exemption (on machinery and equipment imports), investment allowances (next year's investment allowance may be deducted from this year's taxable income), VAT exemption on importing, exemptions on stamp duties, energy support, land allocations, and credit supports.

3. BOT Contract Successes and Drawbacks

The BOT model achieved a number of successes throughout the mid-1990s. Through 2001, fourteen new generation facilities were completed under BOT arrangements, creating an additional 1,547 megawatts of capacity in Turkey. An additional 988 megawatts of capacity are currently under construction, and agreements have been signed with investors to build 26 facilities that will provide up to 2,900 megawatts of capacity when completed. The following chart summarizes the status of existing BOT contracts to build new generation facilities in Turkey through 2001:

Turkey BOT Contracts Status

	Hydro		Thermal	
	No. Plants	Capacity (MW)	No. Plants	Capacity (MW)
In Service	10	158	4	1,389
Under Construction	9	988	0	0
Agreements Signed	21	1,681	5	1,211
Approved by Government	1	520	2	2,741
Waiting for Evaluation	2	358	1	650
Total	43	3,705	12	5,991

The BOT/BOO model has run into major problems in Turkey during the past three years. During the late 1990s, Turkish courts rejected several BOT agreements as concessions rather than ownership by the outside consortiums. Ultimately, Turkish law was changed at the federal level to allow for new agreements, but the challenge created major delays and cost overruns on projects impacted. As a result of its economic crisis, the Turkish government stopped extending sovereign guarantees on BOT contract financing beginning in 2000. Since withdrawing sovereign guarantees, Turkey has been unsuccessful in concluding new BOT agreements with foreign investors and the program has been put in jeopardy. The probability that projects being built under previously signed agreements will go forward is uncertain.

The BOT model was not effective in privatizing existing generation facilities, especially those plants that needed restructuring or major investments. Outright sales of generation and distribution companies by Turkey were largely unsuccessful, as investors preferred new construction projects to outdated, environmentally challenged facilities. Although the BOT model led to construction of 1,500 megawatts in new capacity, it may have kept some foreign investors away from purchasing and upgrading existing plants that were in need of capital and outside expertise. For several years, foreign investors were not allowed judicial review of contract disputes by international arbitrators. This fact discouraged participation in the early 1990s and was ultimately changed to encourage new foreign investment. Finally, despite the initial success of the BOT program in generating investment for new plant construction, over 85% of Turkish power generation capacity is still owned by federal and provincial government agencies.

4. Best Practices From the BOT/BOO Method

BOT contracts, like concessions, have been more successful in developing new generation facilities than in privatizing existing enterprises. BOT contracts have succeeded when a host country was able to provide sovereign guarantees of investment capital necessary to build the facility to the outside investor. Typical BOT structures allow the investor to own and operate the facility for at least 25 years, which is the amount of time required for the investor to generate a sufficient return on capital from building a new generation facility. In the case study provided, Turkey was able to generate a significant level of interest from investors during a period of high domestic growth (5% or greater), internal political stability, and reasonable levels of inflation. With the deterioration of the Turkish economy over the past two years and declining investment levels in the energy sector, interest in new BOT projects and Turkey has gone away. This can partially be explained because of the long payback period (at least several years) required before new generation companies begin to generate positive cash flow.

5. Lessons Learned for Romania

- Establish investor-friendly conditions when offering BOT contracts (economic incentives, third-party arbitration, etc.).
- BOT contracts will likely be more successful on new projects rather than for generating investment capital to restructure existing facilities.

- Standard BOT contracts are 25-30 years, frequently with an option to renew the contract for the same period.
- BOT contracts in Turkey always had sovereign guarantees from the national government.

C. Public Auction Method

A public auction is a method of enterprise privatization through public bidding by pre-qualified buyers in conformity with established conditions of sale. Auctions can be successful when a government is certain that the company being sold has strong investor appeal. Auctions typically have clearly defined conditions, with the company valuation (or price) serving as the primary determinant of the winning bid. Few significant auctions have been attempted over the past two years, reflecting the increasing difficulty of completing energy sector transactions and the declining number of bidders for major new privatization offerings.

1. Case Studies in Latin America and Eastern Europe

Public auctions were used as a method of privatization for several large Latin American power companies during the late-1990s, in addition to transactions involving small, local operations in certain Eastern European markets. Brazil, Argentina, and Peru were able to privatize several large distributors and a handful of generators by inviting strategic investors to bid at auction.

Bulgaria established a program to privatize 36 small hydroelectric facilities through local auctions, and Albania and Estonia have each used auctions to sell two distribution enterprises in their respective energy sectors.

2. Public Auction Guidelines and Structures

Large auction privatizations are usually conducted using the following guidelines. The auction is announced via international newspapers and invitations to strategic investors. Investors are pre-qualified and must bid under the structure provided by the host government (ownership share, etc.). Auction guidelines must be kept very simple and should focus on achieving the highest price. Auctions often involve well-known single facility companies that require minimal due diligence efforts prior to submitting a bid. Investors may be asked to submit sealed or open bid offers. Under the open bid system, investors can submit counter-offers until the maximum price is achieved. Other elements that should be considered in the auction design include the political sustainability of the outcome, the robustness of the firm's bidding strategies, and the opportunities for collusion among firms. All of these elements combine in determining whether an auction design yields value; how that value is distributed among bidders, consumers, and the government; and whether the deal will be successful in the medium and long-term.

3. Auction Successes and Drawbacks

Auctions should only be conducted when a government is certain that the company being sold has strong investor appeal. Bids must have minimal conditions (usually without

employment guarantees) to be successful, and bid instructions to investors must be clear and without complications. The limited number of large-scale auctions that have been attempted over the past two years underscores the increasing difficulty of completing energy sector transactions in the current global economic slowdown.

Large auction privatizations are extremely risky in the current market. Receiving no legitimate offers may sharply depress the value of the company and make a later sale difficult. Countries attempting large-scale auctions need well-developed capital markets and domestic banking institutions to minimize financing risks for the winning bidder. Auctions make it difficult to negotiate factors other than price, such as capital investments and employment guarantees. Investors often bid in consortiums with local partners. Attracting foreign investment is an essential element to privatization, as Romania's domestic investor market is just developing and not prepared for a major transaction.

4. Best Practices from the Public Auction Model

The public auction model is best suited for the privatization of small to medium size assets that are sure to draw interest from investors. Issues relating to future investment, employee retention, and other key operational concerns are difficult to address in this process. Due to the size and complexity of power generating assets, the auction method is not the ideal process of privatizing these assets.

5. Lessons Learned for Romania

- Auctions should be considered in cases where the host government is relatively certain of receiving adequate interest from investors.
- Auctions are more successful for small to medium sized enterprises.
- Negotiable factors other than price, such as capital investments and employment guarantees, are difficult to conclude under the auction system.

D. Capitalization and Public Sale

The privatization method of capitalizing a company and selling all or part of its stock on a local stock exchange has been tried for energy companies in several emerging market countries. This model provides a liquid market for resale of the company's stock, which can be useful in raising new capital for future investment. As a first step in the privatization process, responsibilities and assets utilized in electricity generation are transferred into a new joint stock company with 100% of its shares owned by the national government. This step creates a legal corporate structure around the enterprise to be privatized and is referred to as capitalization. The newly capitalized company establishes an oversight Board of Directors or Supervisory Board, approves bylaws, issues and authorized a specific number of shares, and establishes contracts with its customers. Power generation enterprises may or may not be split up into separate joint stock companies, depending on the strategy of the local government. An independent management team is appointed by the Board to run the company and make preparations

for the privatization process. Often, the joint stock company undertakes a restructuring program to improve the condition of its operations and increase its attractiveness for outside investors.

Ownership structures under this method typically include at least the following shareholder groups:

- Public investors
- Employees in the joint stock company or the industry
- National or provincial government

The host government usually attempts to sell a large minority ownership position (25% - 40%) of the energy company to public investors through an initial public offering on the country's national stock exchange. The government may retain a large position (often 45% - 60%) that can be sold at a later date for a higher valuation. Employees or citizens often receive a small minority ownership stake at no cost or at a heavily discounted price (typically 10% - 15%) as a reward from the privatization process. Employees will be limited in their ability to initially trade their shares, but the goal is for the local stock exchange to provide a liquid market for resale of stock over time. Other investors that may participate under the capitalization and public sales method include strategic investors and national vouchers or privatization funds that were established in several Eastern European countries.

1. Case Studies in the Czech Republic, Hungary and Thailand

The Czech Republic attempted to complete the privatization of CEZ, the state electricity generation and distribution monopoly, as a single company through a voucher privatization and public offering of its shares. CEZ owns 23 thermal and hydro power facilities, 1 nuclear facility, and 4 alternative power generation facilities. CEZ provides approximately 80% of the electricity in the Czech Republic. This approach began in 1995 and was not well received by investors, nor did it generate new capital for CEZ. The Czech government ultimately repurchased a majority of the shares sold to the public and began an attempt to repackage CEZ as a trade sale in 2001. The trade sale instructions to investors included a minimum price and stringent conditions on fuel supply contracts. Most investors ignored the instructions and began to bid on individual distribution or generation assets that had interest for them. The Czech government ultimately announced that one bid was acceptable on price but failed on fuel supply conditions, while another provided adequate fuel agreements but was below the threshold price. The privatization of CEZ has been suspended for the time being. Many investors provided feedback to the Czech government that CEZ was too complex and integrated an entity to be sold as a single unit, particularly with the very stringent bid conditions required. The large size of the CEZ package also limited the number of potential strategic investors that were able to participate.

Hungary unbundled a large portion of its state-owned energy industry during the mid-1990s and privatized individual distribution companies through sales on the Budapest Stock Exchange. The primary driver behind the Hungarian strategy was a need to raise

funds to balance the national budget, and the government sold a large number of energy-related enterprises during a short period of time. Hungary was able to sell approximately 50% of eight electricity distribution companies through public offerings between 1995 and 1997, with all of the proceeds going into the national treasury. Large shareholdings were subsequently sold to strategic investors in several cases, which brought new capital and management expertise to the electricity companies in question. As an additional success, many of the privatized generation and distribution companies have received new capital and operate efficiently as private companies. Over 60% of the Hungarian energy sector has now been transferred to private ownership. Hungary was unable to modernize its regulatory environment or to solidify long term contracts between generation and distribution companies prior to their privatization. These issues continue to create problems on the Hungarian market and serve as important lessons that can be learned from this example.

The Government of Thailand privatized the Ratchiburi Power Station, a 3,645 megawatt thermal generation facility, through a sale of 40% of its equity to public investors in 1999 and 2000. Ratchiburi is Thailand's largest generation company and needed substantial investments of new capital in order to modernize and upgrade its facilities. As part of the privatization method, energy sector workers (at Ratchiburi and other state-owned energy companies) were given 15% of the outstanding shares for free. These shares could be sold by workers on the Bangkok Stock Exchange after a three-year holding period. The government received proceeds of \$250 million from the sale of the 40% stake in Ratchiburi and directed 100% of these proceeds back to its energy ministry for new investments and plant modernization in the electricity sector. In addition to the public offering, the government was able to secure loans from several private lenders for Ratchiburi (sovereign guarantees were provided) to upgrade its existing facilities. Although the government is the largest shareholder in Ratchiburi, outside investors nominate 50% of the company's Board of Directors. Since the privatization, Ratchiburi has successfully increased its output, upgraded several of its facilities, and improved its environmental record. Whereas some company employees initially opposed the Ratchiburi transaction, many have been able to sell their shares through the stock exchange and received a direct personal benefit from privatization. This strategy of sharing privatization proceeds with the employees is an important lesson that can be gained from this method.

2. Capitalization and Public Sale Successes and Drawbacks

Under this method, the commercialized company frequently initiates a restructuring program prior to privatization that may increase the chances of success and potential investor valuations. Employees may receive shares, options or other financial incentives connected to the public offering, which creates greater public support for the privatization and offers direct benefits to workers impacted by the transaction. New outside capital can be raised through the public offering to be contributed to the state treasury or for reinvestment in the energy sector, both of which have benefits for the host government.

The newly privatized company improves its access to future debt and equity financing sources through the stock listing. Under the sample structures presented above, strategic

investors were excluded from the initial privatization or purchased minority shares, which reduced political fallout over selling important national assets to foreign firms. Finally, the government retains a large equity stake that can be sold at a later date to raise additional funds, especially if the newly privatized company is successful on its local market.

The public offering model also presents several major risks that were experienced under earlier privatization attempts in the energy sector. As discussed, the voucher privatization on the Prague Stock Exchange of CEZ was highly unsuccessful. The public nature of the company and its disclosure requirements then made a subsequent trade sale more difficult. The local stock market must be strong and liquid enough to absorb a large infrastructure offering. The Bucharest Stock Exchange still has a relatively small market capitalization and could not at present provide the investor base to support a utility industry offering of much size. Without a strategic investor, the privatized company does not gain access to new management expertise or to western financing sources. Difficult but necessary restructuring decisions can often be postponed because of the absence of a strong outside shareholder. As the largest shareholder under most of the examples provided, the host government was frequently required to provide sovereign guarantees to secure bank financing in newly-privatized companies, or in some cases to contribute funds from the state treasury to cover operating losses. Although the company has been privatized, the host government may still be responsible for much of the operating cost if the energy enterprise continues to need funds. Finally, a publicly traded company bears substantial valuation risk on an emerging markets stock exchange. Public valuations can fluctuate wildly, and most energy sector values in Eastern Europe have declined sharply during the past two years or since their public flotation. The Bucharest Stock Exchange does not have single-day trading limits that can protect the valuation of a stock during difficult trading conditions. Given the low liquidity of the exchange, investors could potentially manipulate a stock price in order to gain control of an important electricity company.

3. Best Practices From the Capitalization and Public Sale Model

Public offerings have allowed a host government to raise money from privatization for the state treasury or other needs, while retaining an ownership portion that could be sold at a later date. Privatization through public offerings also helped to stimulate and encourage the local stock markets in Poland, the Czech Republic and Hungary during the mid-1990s by introducing new domestic and foreign investors to their capital markets. Successfully capitalizing a company prior to the privatization allows a new management team to develop a restructuring plan that can build a stronger enterprise and increase the chances of a successful privatization transaction over time. Successful public offerings have also helped companies to secure new forms of capital, including bank loans and western investors over time.

4. Lessons Learned for Romania

- Include employees or industry workers in the privatization process by providing them with shares, options or some form of compensation from

the transaction. This allows the host government to demonstrate that privatization can create both short-term and long-term benefits for the people impacted by the transaction and increases internal support for the process.

- Given the lack of maturity and liquidity on the Bucharest Stock Exchange, a public offering of any energy company would have to be fairly small. The Bucharest exchange most likely could not absorb a major energy sector privatization for some time.
- Through the capitalization process, an enterprise can establish an independent management team, corporate structure and restructuring program prior to privatization. These steps will increase transparency and investor interest in the process.

E. De-monopolization and Sale

The de-monopolization and sale model employed in such markets as Poland and Hungary was performed by transferring responsibilities and assets utilized in electricity generation into a joint stock company with 100% of the shares owned by the national government. Individual generation facilities were established as separate joint stock companies, breaking up the monopoly. Restructuring programs were developed and begun prior to privatization. The government then established a priority list for privatizing individual companies through trade sales to strategic investors one at a time. Ultimately, some generation facilities remained government owned because they were strategic national assets or because investors had little interest.

1. Case Study in Hungary

An example of the de-monopolization and sale model occurred in 1995, when Hungary privatized five power generation companies through trade sales to strategic investors. This method was coupled with the public offerings of distribution companies described in the previous section. Electricite de France purchased two companies, while investors in the other three included Isar-Amperwerke AG, Bayernwerk AG and the RWE-EWS consortium. Strategic investors purchased between 48% - 50% of each company, but were given operational control, Board level parity, and the opportunity to acquire majority control within three years. Since Hungary began this method in 1995, several additional government-owned generation companies have attracted the attention of foreign investors.

2. De-monopolization and Sale Structures

The typical transaction structure under this method has included majority or operating control. Of approximately 150 reported sector privatizations, strategic investors purchased majority control within five years or received operating control in over 70% of completed deals. Investors typically prefer opportunities where they can gain majority or operating control so they can implement their own management strategies to optimize a potential investment. Strategic investors often bid in a consortium to reduce investment

commitments. In some cases, minority sales have involved a public offering or third investor.

In addition to securing the ultimate purchase price through negotiation, selling governments have focused on issues that affect the long-term viability of the energy producing assets. For example, in Poland the government made guarantees on sales that have ranged from 18 months to several years. By guaranteeing a level of energy sales, the investing party can allocate more resources to improving generating assets to meet future needs. Guaranteeing sales has been most commonly used with existing generation assets that require modernization or upgrades. To achieve the maximum purchase price, Poland has structured most of its privatization sales as full solicitations of bidders rather than negotiated sales, while sometimes negotiating worker employment guarantees as part of the transaction.

3. De-Monopolization and Sale Successes and Drawbacks

The strengths of the de-monopolization and sale method include a competitive local market, pricing improvements and attractive valuations. The government creates competitiveness in the local market by privatizing individual power plants separately. This has led to lower energy prices over time and market transparency. By creating several medium-sized transactions rather than one large deal, more strategic investors can participate and competition among buyers can be increased. In most cases, the valuation received by the government has been higher for selling individual parts of the energy monopoly rather than selling the whole. One successful transaction can help improve the price and terms of later transactions, and the investor may commit new capital or offer employment guarantees under competitive bid situations. Investors are reluctant to buy loss-generating assets and may assign lower valuations to a generation company when required to purchase less desirable facilities.

The weaknesses of the de-monopolization and sale method are the result of differences in value and viability among assets. Strong, profitable generation companies may receive several offers, while the government has a difficult time selling unproductive or loss-generating entities and may be forced to keep and subsidize these for the long-term. If the first one or two privatizations fair poorly, it becomes very difficult to complete subsequent deals. The process of privatizing individual generation facilities takes a very long time and may put pressure on the government's financial resources before completion. Strategic investors will look to take a majority position and operating control and will assign a lower valuation to the enterprise for a minority purchase. Once the strategic investor is chosen, the government has very little recourse as a minority shareholder.

4. Best Practices From the De-Monopolization Model

The de-monopolization model has the potential to create healthy competition among power generating companies. To ensure value and attention will be allocated to less attractive power generating facilities, the strategic bundling of assets in terms of size, capabilities and profitability is essential to attract interest from investors. The first

transaction in a new market is the most important, as valuation benchmarks are established and the investing public will either gain or lose confidence in the privatization effort. Once several transactions are concluded and private companies compete, the potential increases for a more efficient market that provides reliable and less expensive power.

5. Lessons Learned for Romania

- Strong assets will receive attention from investors while the less desirable assets may not attract buyers.
- Strategic bundling of assets in terms of size, capabilities, and profitability is essential to attract interest from investors in underperforming or outdated generation facilities.
- The process can result in a more efficient market with competition and lower prices.
- The first transaction will leave a lasting impression on the market.
- Valuation expectations are influenced by control premiums or discounts based on the percentages of the generation companies offered for sale.

F. Sale + Investment Model

Under the sale + investment model, investors are requested to bid on purchasing a generation company, plus committing investment capital to rehabilitate an old facility or enter into a new generation project. This model has been used in privatizations that require a large capital investment following a sale. Investors can be requested to replace any megawatt capacity taken out of the industry with new capacity. The government of Panama used this method successfully to bring its generation plants in line with global environmental standards and increase hydroelectric capacity. Investors will factor costs of investment commitments into their overall offer price and structure.

1. Case Study in Panama

In mid-2000, Panama sold four state-owned power plants with 280 megawatts of capacity to AES, a global energy services company. Along with the purchase, AES received a concession to operate another state-owned hydroelectric facility and contracted to build a new 135 megawatt hydro facility within the next ten years. After the transaction, AES had acquired 49% of the equity in the generation companies, but was given full operating control by the Panamanian government. The government transferred 2% of the equity to company employees and plans to sell its remaining share either to AES or through a public offering within the next five years. AES did not provide worker guarantees and reduced employment by 60% during the first year of operation through a downsizing and a voluntary retirement plan. To improve employee relations, AES developed a plan that allowed a series of cash payments, life insurance, health insurance, and a discount on electric bills, among other incentives.

AES received financing through the IFC and local banking sources to complete the transaction.

2. Sale + Investment Structure

The sale + investment model typically begins with the government dividing state owned assets into groups that would be attractive to investors in terms of size, profitability, and operating capabilities. The government then solicits bids from both foreign and domestic investors for the state owned assets. The bids are coupled with plans to make additional investments in existing facilities and/or future projects. The winning bid is comprised of the most attractive combination of purchase price and capital investment commitment. Under this structure, investors typically receive operating control, while the government retains a substantial ownership position in the assets.

3. Sale + Investment Model Successes and Drawbacks

The sale + investment model yields benefits for both the government and investors. The model is attractive to investors in terms of control. Investors will generally receive operating control, if not majority ownership, after a transaction. In addition to controlling the existing assets, the investor will have control of the required future investments and could potentially build a series of profitable power generating assets. The government benefits from the model in two primary ways. First, the government will receive compensation for the state-owned assets while retaining substantial ownership. This model requires the government to make a high level of political commitment to the process as jobs may be terminated and control of the assets is transferred to foreign investors. A portion of the proceeds from the sale may be set aside to fund programs that assist employees that loose their jobs under a new ownership structure. The second key benefit of this model is the commitment to make additional investments in either existing or new power generating assets. Additional investment in power generating assets should increase capacity while the introduction of new and innovative management techniques will likely increase the efficiency of existing facilities. If multiple power generating assets are privatized under this model, competition among privatized companies should produce lower energy costs in the future.

Several drawbacks exist for the government, employees, and investors under this model. The government should expect political backlash from employee layoffs and plan to deal with the issue in an appropriate manner. In Panama, the government transferred a minority ownership position to the employees and established job placement and training for former employees.

From the employee perspective, the sale + investment model may mean a change in management and job cuts. Employee resistance is expected and both the government and the investors must plan accordingly. However, the initial structure may contain provisions that require follow-on investments that create new jobs.

4. Best Practices From the Sale + Investment Model

The sale + investment model is best suited for privatizations that require a large capital investment following a sale or in countries with undercapacity in the generation sector. This method is a long-term solution that can be difficult to manage. The Panama case demonstrated that dealing with job cuts under this model is an important political/social issue. Furthermore, the case shows that this model has the potential to attract investors interested in a long-term approach to investing in current and future power generating assets. Due to the large investor commitment, the number of potential investors is limited to larger multinational concerns. However, attractive bundling of assets has the potential to expand the audience of investors.

5. Lessons Learned for Romania

- The sale + investment model is a strong choice for attracting long-term investment and foreign capital to modernize outdated or underperforming facilities.
- The government must be committed to deal with the social and political implications of this model.
- Given the high level of financial commitment (purchase + investment costs) required of investors, most buyers will seek operating or share control under this method.

G. Partial Sale and Pension Investment Method

The partial sale and pension investment model developed by Bolivia in 1995 achieved success in raising new investment capital for local generation enterprises and shared the benefits of privatization directly with workers and pensioners. The distinguishing feature of this method is that the sale proceeds stay with the privatized company to finance future investment. If for example, the net fixed assets of a generation company have a market value of \$250 million, a strategic investor would pay \$250 million into the company. With this new investment, the company now has a market value twice as great, or \$500 million -- \$250 million of fixed assets and \$250 million of cash. This cash would be available to the privatized company for investment in new assets or to upgrade existing facilities.

Also under the Bolivian model, the government share (typically 50%) of the newly privatized company would be distributed to the local citizenry. This approach to privatization can mitigate some of the popular doubts about traditional-sale methods. This method was developed for privatization situations in which the asset or company for sale was likely to generate strong investor interest, where the government can afford to give up the direct proceeds of the sale, where popular participation in the form of share distributions may avoid political backlash, and where the sector needs significant new investment to upgrade outdated facilities. The other requirement is that the country has laws that allow for private pension funds, or has developed a mechanism by which the transferred shares can be owned in the name of local citizens.

1. Case Study in Bolivia

Bolivia privatized several key infrastructure industries, including power generation, during the mid 1990s utilizing this method. The Bolivian government offered to sell a 50% equity interest in four independent electricity generation companies, plus full operating control to a strategic investor. The remaining 50% of shares were transferred into private pension funds and divided equally among all Bolivians over 65 years old. The government intended to sell the 50% share owned by the pension funds through a public offering at some later date on the Bolivian Stock Exchange, which would then provide the funds from the sale to pensioners.

2. Partial Sale and Pension Investment Method Successes and Drawbacks

Bolivia has sold two of its four electricity generation facilities and raised \$154 million in new investment capital for the sector. All of this new investment capital was reinvested back in the newly privatized company to increase their capacity or modernize their production facilities. The pension shares and the creation of a private pension system have helped to develop the local capital markets and strengthen the Bolivian Stock Exchange. To date, one-generation company has successfully listed its shares owned by the private pensions on the Bolivian Stock Exchange. A strategic investor in the second privatized electricity generation plant eventually purchased the remaining 50% of shares from the pension funds. Both of these results generated new funds for Bolivian pensioners to supplement their retirement income.

This model also has drawbacks, particularly for the government that is privatizing the energy companies. None of the cash proceeds from the sale of the assets are directed back to the state treasury, which can be very politically unpopular. A large percentage of the Bolivian population believed that giving sale proceeds back to the newly privatized companies had effectively allowed foreign investors to buy the electricity companies for no money. This method became more politically difficult during the later part of the 1990s, and Bolivia has not completed any infrastructure privatizations using the partial sale and pension investment method since 1999. Furthermore, pensioners do not receive funds from the pension plans until a liquidity event, such as a public offering or sale, can take place. This may take several years to complete, if not longer. During this period, the valuation of the electricity company may increase or decrease, and pension investors must bear this risk. The two electricity companies that remained state-owned did not receive new investment capital and continue to put a strain on the national budget. The Bolivian government was not able to negotiate long-term employment guarantees for workers at the privatized companies, which made this method more unpopular as time went by.

3. Best Practices From the Partial Sale and Pension Reinvestment Method

Bolivia's electricity generation facilities required a substantial level of new investment in order to upgrade their existing facilities and ultimately provide affordable energy to their

customers. The approach of coupling privatization with new investment commitments helped to bring the funds needed for investment into the privatized companies. Bolivia also developed a strategy to include a broader segment of the population – pensioners, in the privatization process. In most other examples, pensioners receive no direct benefits from privatization and have often been opposed to the process. The Bolivian strategy of selling 50% of shares plus operating control succeeded in attracting foreign investment to the sector, but allowed the government to retain an ownership position of significant value.

4. Lessons Learned for Romania

- Consider dedicating a share of the proceeds from privatization for a broader constituency (such as pensioners) who typically don't benefit from the process. This will help relieve strain on the state treasury, while potentially increasing support for the privatization program. The benefit to the pensioners should be tangible and easy for average citizens to understand, however.
- Include investment requirements to modernize facilities as part of the privatization program, so that older generation companies can receive needed funds to be competitive on the local market over the long term.

III. Summary of Best Practices from All Methods and Models

We believe the privatization methods detailed in this report offer the following best practices that can assist Romania:

- Concessions allow the government to bundle power generation facilities under one contract, which accelerates the speed of the transaction. Government sovereign guarantees are typically not required under concession contracts, although the government is still providing much of the capital required.
- Both concessions and BOT contracts have been more successful in developing new generation facilities than in privatizing existing companies.
- BOT contracts have only been successful when a host country was able to provide sovereign guarantees on invested capital.
- Auctions can lead to rapid privatization, but should only be tried on transactions with minimal complexity, and where investor interest is expected to be very strong.
- Public offerings have allowed the government to bring in new investors, but also retain an ownership share that could be sold later for additional funds.
- Public offerings have helped develop the local capital markets while providing employees or citizens with a direct share of the financial benefits from privatization.

Additional best practices include:

- De-monopolizing the sector and selling individual facilities has typically generated the highest prices and most attractive investment and employment commitments for generation facilities that were sold.
- The attempt by the Czech Republic to privatize an entire energy monopoly (CEZ) was unsuccessful for a variety of reasons. Investors were concerned about the complexity of the bid requirements and tended to undervalue the less attractive generation facilities that they would be required to purchase.
- Trade sales of individual generation companies have generated higher valuations when an investor could purchase a majority of shares.
- Individual trade sales require more time to complete than bundled asset sales or concession contracts, but offer the potential to bring more strategic investors and capital into the local market.
- As shown by the Panama and Poland experiences, governments can bundle sales with investment commitments from the strategic investor.
- The Bolivian concept of providing shares to pensioners was initially very popular with Bolivian citizens; however, the privatization method needs to more rapidly generate real income for its citizens to remain popular.

SECTION IV

Qualitative Assessment Of Various Privatization Models Suitable For Romanian Power Generation Section

Generally speaking, most power sector privatizations in emerging markets are driven by several clearly discernable challenges or realities that influence their policy options. In rapidly growing markets, these include a lack of government funds to construct or modernize additional power generation facilities. Multilateral agencies including the World Bank and International Monetary Fund may be encouraging fiscal discipline in the host country through structural adjustment facilities that essentially limit the annual amount of new external debt that a country may incur by sector. For countries in Eastern Europe, the desire to meet accession requirements to the European Union including protocols on environmental compliance, market reform and sector restructuring can limit the options available to enterprises owned by government agencies. Notable in almost all energy privatization transactions is the desire to improve operational efficiency and lack of capital funds available for upgrades of existing facilities.

I. Privatization Priorities

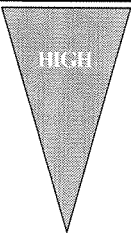
As part of the survey of Romanian energy sector officials completed by the Hunton & Williams task force, we were able to identify and prioritize several goals and objectives of key decision makers. Broadly stated, the top priorities of power generation privatization for Romania that were identified by key officials include the following key initiatives:

- Progress towards achieving European Union accession in the areas of environmental compliance, utility restructuring and market liberalization
- Introduction of private operators and competition into the generation and distribution sectors.
- Improved operating efficiency and maintenance within the sector over time.
- Expansion of reliable, low cost electricity to the Romanian people.
- Generation of additional sources of investment capital for plant modernization, upgrades, and completion of generation facilities.
- Generation of funds to support national pension and health care obligations, specifically for energy sector workers affected by privatization transactions.

The generation of proceeds for the annual national budget was not included as a top privatization objective in most surveys of Romanian government officials. Other objectives, including sector employment guarantees, expanded service areas, better working conditions and the ability to export to new markets were listed by some survey participants, but not a majority.

Romania has several different ownership structures to consider for its power generation sector, each offering different levels of rewards and making different stages of progress towards the primary objectives for the sector identified above by key policy makers. The chart below summarizes different levels of ongoing involvement for government and private owners in the energy sector, based on the selected form of ownership of primary generation companies:

Ownership Involvement Matrix

Option	Asset Ownership	Operations and Maintenance	Capital Investment	Commercial Risk	Duration	Ongoing Government Involvement
State-owned energy sector	Public	Public	Public	Public	Indefinite	
Service contract with private firms	Public	Shared	Public	Public	1-2 years	
Management contract	Public	Private	Public	Public	3-5 years	
Lease	Public	Private	Public	Shared	10-15 years	
Concessions	Public	Private	Private	Private	25-30 years	
BOT	Private	Private	Private	Private	20-30 years	LOW
Sale or Divestiture	Private	Private	Private	Private	Indefinite	

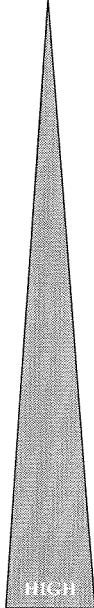
Keeping generation companies under public ownership creates the highest level of government involvement among the most commonly used ownership structures in emerging markets. As such, the government assumes all of the commercial risk and is responsible for providing the capital investment and ongoing funds necessary to keep generation companies operational. As a first step towards privatization, some governments have tried operating service contracts with private firms in order to share the responsibilities for daily operations. Management contracts begin to bring operational efficiency to the generation companies, but a government owner must still supply all investment capital and assume the costs of any financial losses.

Lease and concession contracts represent an initial step towards actual privatization, as the private sector partner assumes a greater share of ongoing operations. Public and private sector partners begin to share levels of investment and commercial risk. BOT agreements to build new facilities or outright sales of existing companies represent the furthest step towards full privatization of an enterprise. Ongoing government involvement in daily operations has now been minimized, and capital to build or improve the company must be supplied by the private sector owner rather than the local taxpayer. Ultimately, lack of budget funds and the desire for more reliable or lower cost service have been the driving factors for most privatization decisions. Since 1992, more than 175 power generation companies have been privatized or sold in emerging market countries, as detailed in the attached Appendix. The average ownership share sold was 53%, and over 85% of transactions involved a majority sale or sale of operating control within five years of completing the transaction.

The method of privatization chosen by the Government of Romania is also dependent upon the level of regulatory support and political commitment available to complete

transactions. The Hunton & Williams task force developed the chart below through the evaluation of market factors and regulatory reforms to support privatization in over twenty-five emerging markets that had completed energy sector transactions during the past twelve years. As shown by the chart, the level of political commitment necessary becomes the greatest as financial incentives to both the privatized company and the selling government increase. For example, a full privatization through one of the trade sale methods profiled under Section 3 can generate the maximum level of funds for new investment and the host government, but will also require the highest political commitment.

Level of Involvement Matrix

Option	Political Commitment	Cost-Recovering Tariffs Required	Level of Disclosure	Developed Regulatory Framework	Good Country Credit Rating	Financial Benefits of the Option
State-owned energy sector	Unimportant	Not necessary	Unnecessary	Minimal monitoring needed	Not necessary	
Service contract with private firms	Unimportant	Not necessary in short term	Possible to proceed with limited information	Light monitoring needed	Not necessary	
Management contract	Low to moderate levels needed	Preferred but not necessary	Sufficient information required to set incentives	Moderate monitoring capability needed	Not necessary	
Lease	Moderate to high levels needed	Necessary	Good information and disclosure required	Strong capacity for regulation and coordination needed	Not necessary	
Concessions	High levels needed	Necessary	Good information and disclosure required	Strong capacity for regulation and coordination needed	Higher rating will reduce costs	
BOT	Moderate to high levels needed	Necessary	Good information and disclosure required	Strong capacity for regulation and coordination needed	Higher rating will reduce costs	
Sale or Divestiture	High levels needed	Necessary	Good information and disclosure required	Strong capacity for regulation and coordination needed	Higher rating will reduce costs	

Established pricing and tariff guidelines become very important once the privatization process has introduced competition and multiple owners to a market. Trade sales and new BOT contracts require a high level of financial and operational disclosure by the host government because of the major investment and time commitment expected of the strategic partner. Some countries, including Ukraine and the Czech Republic, had less success with their chosen privatization methods because of their shortcomings in establishing a proper regulatory environment with pricing transparency and adequate off take agreements prior to initiating transactions. A strong sovereign credit rating can also be helpful for both government and private owners by reducing the cost of borrowing funds from international lenders to support the privatization transaction. Almost all purchasers must rely on international credit providers to partially fund privatization costs, who perceive countries with greater political and economic stability as having less credit

risk than more volatile nations. The lower credit risk reduces the cost to strategic investors, which can free up funds for additional investment or purchase price consideration.

II. Impact of Privatization Options on Romanian Government Objectives

The privatization method selected by the Romanian government may positively or adversely affect one of several different constituencies. The Hunton & Williams task force has analyzed the priorities identified in our survey and the impact of the methods for privatization outlined in Section Three on each constituent group. Power sector privatization impacts each of the following constituent groups, with each having particular risks and benefits that need to be considered in ranking the various privatization options:

- Power Generation Companies: Ability to survive and grow, profitability, position in the domestic energy market, export opportunities, investment needs, ability to attract potential partners, investors or acquirers;
- Employees: Job creation or loss, changes in compensation, benefits, training, pension or health care benefits, the potential to advance or acquire other marketable skills;
- Romanian consumers and Citizens: Energy cost, tariffs and prices, reliability of service, dependability of future supply and infrastructure requirements, overall impact on quality of life, generation of funds to support pension obligations over the long term;
- Investors: Attractiveness of the enterprise, potential returns, ability to compete in the domestic market, barriers to entry, long term growth opportunities;
- Romanian Government: Stability of energy sector, investment required, EU accession requirements, participation of foreign investment, and changing of laws and regulations;
- Environment: Utilization of assets and control of environmental quality;

The matrix below compares the potential benefits to each constituent group in Romania based on the privatization methods outlined in Section Three.

Privatization Benefits by Constituent Group

Option	Generation Company	Employees	Energy Consumers	Investors	Romanian Government / EU Accession	Environment
Concessions	Low	Low	Low	Moderate	Low	Low
BOT/BOO Contracts	Low to Moderate	Low	Moderate, depending on capacity shortages	Moderate to High	Low	Moderate
Auctions	Low	Low	Low	Low	Moderate	Low
Capitalization and Public Sale	Moderate	Moderate to High	Low to Moderate	Moderate	Moderate to High	Low
De-Monopolization and Sale	Moderate to High	Depends on negotiated conditions, may be High	High	Moderate	High	Moderate
Sale & Capital Investment	High	Depends on negotiated conditions, may be High	High	High	High	High
Partial Sale & Pension Investment	High	Low	High	Very High	Low to Moderate	High

Trade sales achieve the highest number of priorities identified by Romanian policy makers as their goals for generation sector privatization. Given the low level of liquidity and relatively small capitalization of the Bucharest Stock Exchange, a sale of generation companies through public share offerings has limited appeal or chances of success during the next two years. We believe that a certain degree of de-monopolization before privatization is essential for long-term growth of the sector. Termoelectrica would have a difficult task in competing directly against Hidroelectrica in the short term, and a private duopoly of these two companies would be unlikely to bring true competition or service and reliability improvements to the power sector. As shown by other countries that have completed privatization of their energy sector, the market achieves higher levels of efficiency whenever several independent generation and distribution companies are able to operate on a national level over the long term.

Given the high cost of investment needed to modernize many of Romania's generation facilities (particularly within Termoelectrica), we have concluded that minimum investment requirements included with privatization transactions are necessary for the sector to grow and succeed over time. Investors have shown a willingness to make such commitments in other privatization transactions (see Poland, Panama and Bolivia examples in Section 3 of this report), as long as they have operational control over decisions on capital expenditures. We recommend that investors be given the authority to choose the form and timing of investments (environmental compliance, equipment upgrades, capacity increases, etc.), but that the Government of Romania provides specific requirements on minimum investment levels necessary by the strategic partner over a multi-year period. Investors will include these requirements in their valuations of individual generation companies to be privatized, but will generally support any structure

that allows a share of proceeds to remain with the privatized entity in the future (through new capital investments).

Bolivia's experiments with allocating a share of privatization proceeds into private pension funds achieved mixed success, but was strongly supported by the local citizenry. As discussed in Section 3, the Bolivian government transferred 50% of the shares in each privatized company to a bundle of private pension funds that would manage these shares for all eligible Bolivians over 60 years old. Ultimately, the government intended to list these shares on the local stock exchange, which could provide liquidity to the pensioners and further the development of Bolivia's capital markets. The time required to list shares in privatized companies took longer than originally anticipated by the government, but the concept of providing direct benefits from infrastructure privatization transactions to pensioners within the country remains highly popular. Retired workers represent a constituency that typically receives little immediate benefit from privatization programs. In Romania, the national laws do not presently allow for the direct transfer of shares in a state-owned company to private pension accounts. However, the Government could implement this concept in Romania through other alternatives, such as contributing proceeds into a Stabilization Fund overseen by the national pension system or an independent government agency. The stabilization fund could release cash payments to pensioners either immediately or over a multi-year period in order to increase support for privatization throughout the country.

III. Ranking of Privatization Alternatives

We have concluded that a combination of elements from the trade sale methods detailed in Section 3 will provide the most attractive privatization structure for the Romanian generation sector and achieves the highest number of stated goals and objectives. The Government may choose to structure trade sales as outright share transfers or joint ventures between a strategic partner and either Termoelectrica or Hidroelectrica. The most important elements that Romania should incorporate into a trade sale methodology include:

- Partial de-monopolization of Termoelectrica and Hidroelectrica
- Requirements that investors make investments to modernize or upgrade generation assets following privatization
- Allocation of a certain percentage of funds from privatization for distribution to pensioners or displaced workers
- Sale of a large enough share of each generation asset or facility to provide ongoing operational control to strategic investors.

The following chart provides a ranking of each privatization method in achieving the broader goals and objectives indicated by Romanian policy makers:

*Achievement of Privatization Objectives
By Privatization Method*

Goals From Privatization	Concessions	BOT Contracts	Auctions	Public Offering	Trade Sale
Progress towards EU accession in environmental compliance, restructuring, market liberalization	●		●	●	●
Introduction of private operators and competition		●	●		●
Improved operating efficiency and maintenance	●	●	●		●
Expansion of reliable, low cost energy throughout Romania	●	●			●
Generation of new investment capital		●		●	●
Generation of proceeds for pension or health care obligations			●	●	●

Modified trade sales offer the only privatization method that allows the Romanian government to achieve all of its stated objectives for the power generation sector. At the same time, trade sales generate the greatest financial benefits to constituents in Romania, but require the greatest level of political commitment in order to complete. Section 8 [are you sure, we have translated it like this, but if you had something else in mind, let us know] will detail the specific form of trade sale structure that we advocate for the Romanian generation sector, based on the combination of policy objectives and political realities currently faced within the system.

SECTION V

Evaluation of Termoelectrica And Hidroelectrica Power Generation Assets and Privatization Plans

I. Country Overview

A recent World Bank report states that since Romania began its economic transition in 1990, it has taken a hesitant approach to reforms, and sought to protect vested interests and minimize the social costs associated with the transformation to a market economy. This strategy failed to produce sustainable gains in either economic or social conditions, and the costs have been higher than if a bolder approach to structural transformation had been adopted at the outset.

Lack of political will to reform the energy sector also holds true and constrained institutional and governance capacity are at the root of Romania's less-than-satisfactory economic performance and worsened social conditions. While the new Government has taken actions in a number of areas to establish a reform program, important development challenges remain, particularly with regard to enterprise privatization, reform of the banking and financial sector, restructuring and deregulation of the energy sector.

Recent developments in Romania place the country in a particularly advantageous position to pursue accelerated reforms. After three years of negative real GDP growth rates, the economy began growing again in 2000, and is projected to reach about 4 percent real GDP growth by 2002. The economic recovery has been driven partly by a strong growth in exports, primarily the re-export of processed inputs from EU countries. The sustainability of the current economic recovery will depend on the Government's ability to reform the energy sector.

Due to economic conditions the demand for electricity has decreased over the last decade and today Romania has significant excess installed generation capacity. Table 1 provides a summary of the installed capacity and demand in year 2002.

TABLE 1
INSTALLED GENERATION CAPACITY VERSUS
NATIONAL DEMAND IN YEAR 2002

TYPE OF GENERATION	INSTALLED CAPACITY
Termoelectrica	11,303 MW
Municipalities & Special Status Facilities	1,688 MW
Hidroelectrica	5,905 MW
NuclearElectrica	700 MW
Total Installed Capacity-2002	19,596 MW
National Demand –2002	7,500 MW
Peak Demand- 2002	8,000 MW
Existing Excess Capacity	11,596 MW

II. Current Situation

A. Recent Government Directives

On February 7, 2002 the Official Gazette of Romania reported that the Government of Romania made the decision to transfer nine district heating plants and/or cogeneration facilities from state to municipal ownership. The nine transferred plants were under the patrimony of Termoelectrica and will now be managed and operated by the local administrative-units of the nine municipalities. The total capacity to be transferred to the municipalities is about 1,163 MW. The government's intention is that the municipalities enter into direct power sale contracts with the distribution companies or with Transelectrica. Three other facilities with special status are the Halanga (Drobeta), Govora, and Chiscani plants with a total capacity of 525 MW. The Halanga facility is dedicated to the heavy water nuclear processing plant, Chiscani is dedicated to a paper mill, and the Govora plant is an IPP run by the Government Privatization Authority. The total capacity of the plants transferred from Termoelectrica's control represents about 10% of Termoelectrica's installed capacity. Table 2 notes the facilities which have been, or will be, transferred out of the Termoelectrica system.

TABLE 2
LIST OF COGENERATION FACILITIES TRANSFERRED OUT OF TERMoeLECTRIC'S
SYSTEM OR NOT WITHIN THE TERMoeLECTRICA SYSTEM

Owner	Plant #	Plant	Nearest Major City	County	MW
					Electrical
MUNICIPALITIES	1	Arad CHP	Arad	Arad	50
	2	Bacau CHP	Bacau	Bacau	50
	3	Brasov CHP	Brasov	Brasov	100
	4	Giurgiu CHP	Giurgiu	Giurgiu	100
	5 A	Iasi CHP 1	Iasi	Iasi	150
	5 B	Iasi CHP 2	Iasi	Iasi	100
	6 A	Oradea CHP 1	Oradea	Bihor	205
	6 B	Oradea CHP 2	Oradea	Bihor	150
	7 A	Pitesti CHP 1	Pitesti	Arges	136
	7 B	Pitesti CHP 2	Pitesti	Arges	6
	8	Suceava CHP	Suceava	Suceava	100
	9 A	Timisoara CHP 1	Timisoara	Timisoara	4
	9 B	Timisoara DHP 2	Timisoara	Timisoara	Heat Only
	9 C	Timisoara DHP 3	Timisoara	Timisoara	Heat Only
	9 D	Resita CHP	Resita	Hunedoara	12
					1,163 MW
SPEC. STATUS	1	Halanga CHP	Turnu Severin	Mehedinti	200
	2	Govora CHP	Ramnicu Valcea	Valcea	200
	3	Chiscani CHP	Braila	Braila	125
					525 MW
				TOTAL	1,688 MW

Note:

1. CHP – Combined Heat and Power

2. DHP – District Heating Plant

B. List of Existing Termoelectrica Plants

The thermal generation sector appears to have evolved piecemeal over the last forty years to accommodate residential heating, industrial customers, district heating systems, and electricity demand. Table 3 provides a background on thermal power plants within the Termoelectrica system. Thermal power plants include electricity generation as well as co-generation facilities.

TABLE 3
TERMoeLECTRIC'S INSTALLED GENERATION CAPACITY – MAY, 2002

Plant#	Plant	Country Location	Nearest Major City	County	Installed Capacity (MW)	
					Elec.	Thermal
1	Borzesti (condensing)	Center	Onesti	Bacau	420	
2	Braila (condensing)	S-E	Braila	Braila	960	135
3	Brazi - Ploieski	S	Ploiesti	Prahova	710	2147
4	Bucuresti Sud	South	Bucuresti	Bucuresti	550	2905
5	Bucuresti Vest	South	Bucuresti	Bucuresti	250	1002
6	Grozavesti	South	Bucuresti	Bucuresti	100	894
7	Bucuresti "Progresul"	South	Bucuresti	Bucuresti	200	955
8	Bucuresti "Titan"	South	Bucuresti	Bucuresti	8	309
9	Constanta-Palas	East	Constanta	Constanta	250	1282
10	Craiova	S-W	Craiova	Dolj	300	995
11	Deva Mintia (condensing)	Center	Deva	Hunedoara	1260	270
12	Doicesti (condensing)	Center	Tirgoviste	Dimbovita	400	90
13	Galati	S-E	Galati	Galati	535	1006
14	Isalnita (condensing)	S-W	Craiova	Dolj	630	582
15	Iernut (condensing)	Center N	Tg. Mures	Mures	800	-
16	Paroseni	Center	Petrosani	Hunedoara	300	296
17	Rovinari (condensing)	S-W	Tg. Jiu	Gorj	1320	-
18	Turcenii (condensing)	S-W	Filiasi	Gorj	2310	-
	TOTAL CAPACITY				11,303 MW	12,868 MW

Table 3 shows that after transfer of cogeneration facilities to the municipalities Termoelectrica still has the responsibility of management and operation of 18 thermal power plants with a total electrical capacity of 11,303 MW. Out of the eighteen power plants eight are primarily condensing plants for electricity generation. However, modifications were made to four out of the eight condensing plants to incorporate small cogeneration capability to sell hot water to the host communities. Presently major

rehabilitation work is underway to upgrade Rovinari and Turceni plants. However, many of the plants are over 30 years old.

C. List of Existing Hidroelectrica's Plants

Hidroelectrica is comprised of ten generation branches. Each branch is responsible for management and operation of hydropower plants or pumping stations within its defined area. This defined area is typically a segment of a river where hydro energy can be harnessed based on the rivers potential head. In order to maximize harnessing of the rivers potential energy, Romania has effectively used the cascading method to construct a series of small hydro stations along the same waterway. Data shows that each branch operates several hydro generation stations.

The number of hydro generation plants and their total installed capacity is provided in table 4.

TABLE 4
HIDROELECTRICA'S TEN BRANCHES AND INSTALLED GENERATION CAPACITY

BRANCH	NUMBER OF PLANTS	INSTALLED CAPACITY (MW)	PERCENT OF TOTAL GENERATION	RIVER/AREA
Ramnicu Valcera	34	1625	27.5 %	Lotru, Olt
Portile de Fier (Iron Gates)	3	1335	22.6%	Dunare, Iron Gates I & II
Bistrita	21	636	10.8%	Bistrita, Siret, Prut
Cluj	17	539	9.1%	Somesul Cald, Cris, Dragan, Iad
Curtea de Arges	26	521	8.8%	Arges, Dambovita, Raul Targului
Hateg	12	485	8.2%	Raul Mare
Sebes	4	346	5.9%	Sebes
Targu Jiu	6	193	3.3%	Cerna, Motru, Tismana, Jiu
Caransebes	3	148	2.5%	Bistra Marului, Cerna
Buzau	4	77	1.3%	Buzau
TOTAL	130	5905 MW	100%	

D. List of Nuclear Facilities

Romania has one nuclear power plant (NPP) in operation. This 700 MW NPP is located near the town of Cernavoda close to the Black Sea. The NPP was originally designed to include five 700 MW units. However, only one 700MW unit was placed in operation in December 1996. Nuclearelectrica maintains that start-up the average availability of this unit is about 87%. Unit number 2 is about 40% complete and construction is expected to proceed upon closure of financing in June 2002.

This NPP is based on the Canadian CANDU technology and the reactor utilizes natural uranium fuel and heavy water as a moderator and coolant. The Atomic Energy Commission of Canada and Ansaldo of Italy will be respectively involved in design and construction of unit number 2.

III. Data On Termoelectrica Plants

The best available fuel consumption and heat rate data was obtained informally from Termoelectrica. Table 5 provides this information for all 18 Termoelectrica facilities.

TABLE 5
TERMoeLECTRICA PLANTS FUEL USE AND HEAT RATES

PLANT #	NAME OF THE PLANT	HEAT RATE (Btu/ Kwh)	COMBUSTION FUEL (%)		
			Coal	Oil	Gas
1	Borzesti (condensing)	10,068	23	31	46
2	Braila (condensing)	9,360	0.3	22	77
3	Brazi- Ploiesti	7,717	0	64	36
4	Bucuresti Sud	7,102	0	10	90
5	Bucuresti Vest	6,161	0	90	10
6	Bucuresti "Progresul"	6,648	0	50	50
7	Bucuresti "Titan"	4,102	0	0	100
8	Constanta-Palas	7,672	0	90	10
9	Craiova	9,968	92	8	0
10	Deva-Mintia (condensing)	10,183	85	0	15
11	Doicesti (condensing)	9,360	77	8	15
12	Galati	9,969	0	25	75
13	Grozavesti	6,139	0	10	90
14	Isalnita (condensing)	11,177	85	0	15
15	Iernut (condensing)	8,573	0	0	100
16	Paroseni	11,076	74	0	26

17	Rovinari (condensing)	9,936	83	3	14
18	Turceni (condensing)	10,641	83	3	14

Source: Termoelectrica plant documentation provided by Termoelectrica to Hunton & Williams on April 29, 2002.

The heat rate information shown in table 5 can be misleading as they are averages for the whole plant. Table 5 shows that the condensing facilities have a higher heat rate than the co-generation facilities. Termoelectrica data does not provide a breakdown of heat rates by unit or type of operation, such as extraction or backpressure turbine.

The Rovinari and Turceni plants fuel-handling and combustion systems are specifically designed to only accept low calorific value indigenous coal. Dedicated lignite coal mines are located about 30 km from these facilities. A number of units in the Rovinari and Turceni facilities are being refurbished to continue combustion of the local coal.

Additional data on plant age and number of units at each plant are shown in table 6.

TABLE 6
TERMoeLECTRICA PLANT NUMBER OF UNITS AND PLANT AGE

Plant#	Plant	No of Units	Year Units Constructed	Rehabilitation	
				Unit#	Start/Year
1	Borzesti (condensing)	2	1969		No Record
2	Braila (condensing)	4	1973, 74, 79	Unit 1	1999
3	Brazi-Ploiesti	7	1972,73,78,86		No Record
4	Bucuresti Sud	6	1965,66,67,75	Unit 4	2000
5	Bucuresti Vest	3	1975,76		No Record
6	Bucuresti "Progresul"	4	1987,88,89,94		No Record
7	Bucuresti "Titan"	3	1965,70		No record
8	Constanta-Palas	2	1970,71		No Record
9	Craiova	2	1987,88		No Record
10	Deva-Mintia (condensing)	6	1969,70,71,77,80	Unit 3	2000
11	Doicești (condensing)	2	1979, 1983		No Record
12	Galati	8	1969,75,83,84		No Record
13	Grozavesti	2	1964		No Record
14	Isalnita (condensing)	2	1967, 1968	Unit 2	2000
15	Iernut (condensing)	6	1963,64,66,67		No Record
16	Paroseni	3	1956,57, 64		No Record
17	Rovinari (condensing)	6	1972,73,76,77,79		No Record
18	Turceni (condensing)	7	1978,79,80,81,83,85,87	Units 2,4&5	89,90, 2000
		75		7	

Source: Termoelectrica plant documentation provided to Hunton & Williams on April 29, 2002.

Table 6 shows that Termoelectrica has undertaken rehabilitation work on only 7 combustion trains or units out of a total of 75 units. The 7 rehabilitated units will have a combined capacity of 1825 MW.

Table 6 shows that six Termoelectrica plants were constructed in the sixties, seven in the seventies, and five in the eighties. Therefore, based on table 3 and table 6 about 2800 MW capacity (26%) was constructed in the sixties, about 4458 MW (40%) in the seventies and about 3745 MW (34%) in the eighties. This shows that 26% of the generation assets are over 30 years old, 40% of the generation assets are over 20 years old and 34% of the generation assets are at least 12 years old.

Assuming a life of 30 years for a well-maintained thermal power plant at least 26% of Termoelectrica's generation capacity is ready for retirement and 40% of its generation capacity is close to retirement.

IV. Data On Hidroelectrica Plants

**TABLE 7
TECHNICAL DETAILS ON THE TEN BRANCHES**

	Branch Name	Annual Energy GWh/y 2000	Annual Energy GWh/y 2001	Percentage
1	Râmnicu Vâlcea	3795	2767	19.11
2	Porțile de Fier	6561	7357	50.83
3	Bistrița	1656	1412	9.76
4	Cluj	997	1047	7.23
5	Curtea de Argeș	956	585	4.04
6	Hațeg	683	480	3.32
7	Sebeș	606	280	1.94
8	Târgu Jiu	449	238	1.64
9	Caransebeș	164	178	1.23
10	Buzău	203	129	0.89
	TOTAL	16070	14,473	100

Source S.C. HIDROELECTRICA S.A. Annual Report –2000

Hidroelectrica's 2000 annual report states that 48 plants are between 20- 40 years old, 62 plants are between 15-20 years old, and 20 plants are less than 15 years old. The exact age of each plant has not been provided. This means that 37% of the installed capacity is over 20 years old, 48% is over 15 years old and only 15% is under 15 years old. Most plants are equipped with Pelton, Francis, Kaplan, or Bulb turbines. Most hydro potential is located in the southwest corner of the Romania. Ramnicu Valcea and Iron Gates facilities represent about 50% of the total installed hydro capacity.

In addition to the above installed hydro capacity, Hidroelectrica claims that Romania can capture another 900 MW of potential hydro energy from its rivers. Prior to 1989 the Government of Romania initiated a program to construct additional hydro capacity. Design and construction on twenty- one projects was started. However, due to lack of funding construction was halted on all 21 projects. Hidroelectrica is seeking private investors to complete the unfinished projects on a joint venture, BOO or BOT basis. A list of the 21 unfinished hydro projects is shown in table 8. Hidroelectrica released a tender document in October 2001. It received several expressions of interest but no bids.

It is important to note that in 1998 a EU/ PHARE funded program conducted a detailed study on the unfinished plants. Mertz and McLellan, in association with PowerGen of U.K. performed an assessment of the economic merits of completing Romania's unfinished hydro and thermal power plants. This study concluded that only two out of the twenty-one unfinished hydro plants had a favorable internal rate of return (IRR) and plans for completing the other nineteen facilities should not be considered.

The total estimated capacity of all twenty-one unfinished plants is about 600 MW. The largest one is the Cornetu-Avrig (116 MW) and the other twenty are all under 100 MW and some as small as 2 MW.

TABLE 8
LIST OF UNFINISHED HYDRO PROJECTS

	Station Name	Branch	County	Potential Capacity (MW)	Estimated Value of Completion \$ (Millions)
1	HPD Râul Mare-Retezat	Hateg	Hunedoara	-	35.8
2	HPD Bistra-Poiana Marului. HPS Râul Alb	Caransebes	Caraş-Severin	28	21.8
3	HPD Bistra-Poiana Marului. HPS Zervesti	Caransebes	Caraş-Severin	1.5	1.2
4	HPD Borca-Poiana Teiului	Bistrita	Neamţ	22.6	36
5	HPD Cornetu Avrig	Rm.Vilcea	Vâlcea-Sibiu	116.4	149.7
6	HPD Runcu-Firiza	Cluj	Maramureş	8.8	13.6
7	HPD Siret River. Cosmesti-Movileni stretch	Bistrita	Vrancea	75.2	68.9
8	HPD Valea Sadului-Vadeni	Tg.Jiu	Gorj	22	29.9
9	HPD Cerna-Belareca-Caderea Belareca head	Caransebes	Caraş-Severin	19.9	16.6
10	HPS Islaz (New Project)	Rm.Vilcea	Olt-Teleorman	29	100.5

	Station Name	Branch	County	Potential Capacity (MW)	Estimated Value of Completion \$ (Millions)
11	CHS Pitesti-upstream (New Project)	Curtea de Arges	Argeş	3.5	3.6
12	Tismana downstream 2 HPS and tallrace+ high discharges channel	Tg.Jiu	Gorj	1.7	12.3
13	HPS Gilort-upstream Novaci (new project)	Tg.Jiu	Gorj	11	14.6
14	HPD Subcetate-Simeria	Hateg	Hunedoara	60	70
15	HPD Siriu-Surduc	Buzau	Covasna-Vrancea	1.5	11
16	HPD Siriu - Surduc	Buzau	Buzău-Covasna	48	36.5
17	HPS Rastolita	Cluj	Mureş	35.5	22.3
18	HPD Fagaras-Hoghiz	Rm.Vilcea	Braşov	24.8	34.9
19	HPS Poneasca	Caransebes	Caraş-Severin	1.5	1.2
20	HPS Maru	Caransebes	Caraş-Severin	13	12.5
21	HPD Tisa River, Sapinta-Teceu	Cluj	Maramureş	60	48

Source: Hidroelectrica

V. Data on Fossil Fuel Resources

Romania's domestic fossil fuel resources are listed in Table 9. The GOR's preference is utilization of domestic resources over imported fuel. The GOR maintains that due to security of supply as well as domestic social concerns it would prefer to limit imported fuel to less than 40%.

TABLE 9
ROMANIA'S FOSSIL FUEL RESOURCES

OIL PRODUCTION	PETROM SA expects to produce about 6.6 million tones of crude oil in 2004
NATURAL GAS	PETROM SA, DEPOGAZ SA, and EXPROGAZ SA expect to produce a total of 14 billion cubic meters in 2004
HARD COAL	CNH to mine hard coal deposits mainly from the Valea Jiului area
LIGNITE	CNLO mines about 25 million to 30 million tones of lignite from the Oltenia area
BROWN COAL	SNC Ploiesti SA and SC Banat SA To continue mining brown coal

Romania continues to import natural gas, fuel oil, and coal for consumption in thermal power plants and CHPs. Use of imported fuel is necessary as in many instances due to lack of storage capability and transportation infrastructure, and high cost of mining it is more economical to utilize imported fuel. Also, domestic coal has a high sulphur and ash content which leads to relatively high environmental contamination.

VI. Review Of Generation Sector Plans As Outlined In The National Strategy For Development In Medium Term

The GOR's Medium-Term Energy Strategy calls for construction of new 800 MW generation capacity and rehabilitation or modernization of at least 6500 MW existing generation capacity. The plan specifically calls for:

- Completion of construction of the second 700 MW unit at the Cernavoda nuclear facility. Estimated cost \$700 million.
- Study of completion of the Islaz hydropower station on the Danube. Estimated cost \$100 million. See Table 8, item 10.
- Rehabilitation of thermal power plants units at Mintia, Braila, Turceni, and Bucuresti Sud. An estimated cost for rehabilitation of six units, about 1280 MW is about \$240 million. See Table 6.
- Rehabilitation of additional three units (one 210 MW and two 50 MW) at facilities yet to be identified. Estimated cost \$250 million. See to table 6. Rehabilitating one unit at Isalnita Condensing Facility.
- Refurbish both the Iron Gates I and II hydro stations. Start-up of Slatina, Dunare, and Bicaz stations. Estimated cost \$350 million.
- Construct an additional 183 MW generation capacity based on construction completion of unfinished hydropower stations. Estimated cost \$110 million.

Based on the GOR's plans as outlined above, a minimum of \$1.75 billion is required for new construction and rehabilitation. The Cernavoda nuclear facility is presently seeking financing to complete construction of unit 2. Hidroelectrica released a tender document in October 2001 for construction of the Islaz power station on a BOT basis. Results of the proposal evaluation have not been made public. Termoelectrica has initiated rehabilitation work on several units at the Mintia, Braila, Turceni, and Bucharest Sud facilities. In addition refurbishment work is progressing at one unit of the Isalnita thermal power plant. Hidroelectrica has yet to finance refurbishment of the Iron Gates and other unfinished hydro stations.

The GOR's concept of achieving EU directed privatization goals for the generation sector are focused on privatization of the 600 MW unfinished hydro projects. This approach is severely flawed as prior consultant studies have already shown that it is not economically feasible to construct and operate the unfinished hydro facilities.

The GOR's concept of entering into a joint venture relationship with foreign firms to attract capital urgently required for refurbishment of obsolete facilities is equally flawed. This strategy does not adequately address realistic options for generation sector privatization.

Based on exchange of views with the EU, EBRD, the World Bank, and USAID energy sector officials it is evident that the GOR must revise or modify its energy sector strategy to include financeable options for unbundling of Termoelectrica and Hidroelectrica and introduce competition in the generation market.

SECTION VI

Assessment of Social Impact

I. Overview

The Government of Romania has committed to privatization of generation within less than the next five years (*Energy Strategy 2000-2004*). Under

**Affordable Electricity and
Economic Growth**

**Helps business and industry to
provide continuous employment
and low-cost goods and services.**

**Helps citizens enjoy a reasonable
quality of life.**

this scheme, increasing utility cost recovery will be a cornerstone for real economic reform in the country. The pressing economic issues for the sector make reform efforts more urgent; among the issues that require immediate attention are the social impacts of reforming – privatizing - the sector. Based on the experience of other transitioning sectors throughout the world, absent an informed consumer population that recognizes and understands certain measures that will impact jobs, wages and electricity costs, real sector reforms will not be sustained and

Government intervention – financial and otherwise - will be required. This Section provides an assessment of social impact issues specific to the privatization of generation in the Romanian context.

Termoelectrica. Certain managerial “bad habits” have been institutionalized based on the creation of Termoelectrica (for example) as an entity broken out of the sector’s predecessor state owned company, CONEL. Termoelectrica was established in the context of a precarious financial situation that included: outstanding debt to suppliers and to the State budget; poor bill collections (although improving); lack of new investment against increased losses; and increasing annual fuel acquisition costs for winter fuel that require “emergency” government funding to procure.

History of Employment Issues at Termoelectrica. Upon the establishment of Termoelectrica and Hidroelectrică, personnel employed by the former CONEL and its subsidiaries, were “re-distributed” to the newly established commercial structures and considered to be “transferred workers”. Job continuity was in fact provided, however, no guarantee to receive earlier received salaries, wages and benefits was assured and in fact, there are numerous accounts of workers receiving less pay. There is some question as to whether the Labor Code of Romania was followed in that “transferred” workers should have each formally agreed to the transfer. (Article 69, as interpreted by the Constitutional Court in its Decision 253/2001). Where an employee refuses to be transferred, he/she is entitled to certain notification and compensation based in Law. At the time, there were also certain Labor Code and collective bargaining contract provisions that addressed “reorganization” entitlements (Article 130(1)(a)). The new entities were legally responsible for all debt including social benefits. Upon the break up of CONEL, significant outstanding debt as well as outstanding contributions for social insurance had not been paid. The new entities were also responsible for taking over all pending litigation; this would have included any labor disputes.

At present, Termoelectrica does not have the available financial resources for the payment of the financial entitlements as provided in existing Collective Contracts. It is questionable whether the utilities do – serious data collection in this regard is required.

Electricity Prices. Notably in the past 18 months, electricity and heat prices have increased in Romania. ANRE as the sector regulatory body has developed tariff and pricing methodologies and is responsible for all publication and implementation of increases. Public reaction has become increasingly vocal as prices continue to hike, yet, still do not reflect actual cost. With more market-oriented operations, operating expenses will increase with anticipated rehabilitation and new plants but right now, impacts on service must be addressed. Poor and unemployed and pensioners will be hardest hit with increased tariffs. Considerations of targeted subsidies/income support schemes need to be reviewed. It will be short-sighted to hide behind a thinking that because the “poor cannot pay”, that privatization/restructuring should be halted or delayed. Detailed information on the percentage of poor to be impacted, their locations and their preferences for support must be gathered. In addition, the Government must increase public information efforts for these and other consumers; ANRE has succeeded in conducting certain public information efforts. This information issue should be one for government and not a company issue. However, the Government and company must closely coordinate actions and the company must be strictly guided by benchmarks to assure that the poor and isolated consumers are not forgotten. In addition, public facilities (hospitals, schools, orphanages), small businesses and borderline industrial entities need to be assessed and a program to assure supply developed. Scheduling poses a threat to affordable electricity for consumers at-large.

Stakeholders. The primary players in the current dialogue on restructuring Termoelectrica are Termoelectrica senior managers and the Ministry of Industry and Resources. The trade unions, ANRE and other government entities are sometimes consulted but not at all at the requisite level that can assure full information, a transparent process or sustainable market approach. The parties involved in the actual privatization process in Romania will be the Government of Romania (MIR) and the companies subject to privatization (Termoelectrica/Hidroelectricita) – therefore, both should be participants currently to discern approach to social mitigation considerations.

Key social impact issues of privatizing/restructuring generation in Romania will be three-fold:

- *Loss of employment* of workers at Termoelectrica and at utilities (downsizing and/or close down of plants); also certain support labor in ancillary support jobs;
- *Possibility of reduced salary and/or benefits* of workers and managers at Termoelectrica and utilities; also certain labor in ancillary support jobs;
- *Increase in tariffs* for residential, business and industrial heat and electricity (this will be most challenging in this sector).

There do not appear to be any issues of indigenous population concerns (land and property rights) or dramatic environmental issues relevant to relocating populations.

II. Initial Observations

The main principles of privatization of generation in Romania need to emphasize “affordable, reliable supply of energy services” and should also include “clean energy”.¹³⁴ Government

Of the 55-65% of Romanian towns (rest are villages), 60-90% have central heating. Villages use gas and wood and less than 5% are without electricity. A new nuclear plant is scheduled to be tested in 2004 and to commence operations in 2005 (700mgW); it is anticipated that any surplus can be exported.

should be responsible for the social impacts of restructuring/privatization; however, the State Companies and local utilities, during transition, must abide by well-established, clearly publicized social transition requirements guided in law and monitored. These will include labor notice provisions, legal entitlements and mental and job counseling services where useful. It is clear that political pressures intervene in potential market operations of the sector; this tendency must especially be kept in check in addressing

social issues to assure that a well-designed, comprehensive approach to social impacts is taken, that can be sustained and safeguards the people of Romania.

There appears to be an impression that increased investment implies improved service delivery; more detailed analysis of the social impacts, environmental conditions and structural capacity to support real market operations must be conducted by the entity. Public information has to be considerably increased. Most managers recognize that privatization will trigger increased tariffs. Experience in similar markets shows that increasing payments means service must be reliable; contiguous investments will be required to reduce losses, expand metering and improve overall management and sector staff capacity. Households that enjoy reliable service can be forced to pay (e.g., cut offs), but cut offs must have notice. In the longer term, utilities can start programs of tariff adjustments based on improved service and meter-based billing.

There is little to no energy conservation culture in the country; the inefficiencies of heating with electricity continues. A balanced approach to fuel choice and technologies remains in the purview of the government and should ultimately become a concern of the market. Billing could actually start to show “socially acceptable amount of electricity use for a family of four” and then the amount in excess of this to educate the consumer. Inserts in the bills on easy “how to save energy” and school and work place education materials have been effective throughout the world.

The majority of Termelectrica consumers are state owned; non-payment by these entities continues to be a large problem. Long-term contracts cannot be entered into; PPAs are for one year per regulations that say these agreements can be for a term no longer than five years.

¹³⁴ The Government has a definite energy strategy on hydro and nuclear. The Prime Minister announced that a new energy strategy would be promulgated by his office in March 2002 as a result of finding that the energy strategy issued by the Ministry of Industry and Resources in October 2001 found to be unrealistic and not reflective of the current energy situation in Romania. More information is required on whether this strategy was issued and what, if any, social issues are addressed.

Electrica and Nuclearelectrica have been able to enter into contracts for 8 years; Termoelectrica sees the issue of PPAs as a key one¹³⁵.

Ultimately, the structure adopted by the Government for the sector will determine important social outcomes. The overall financial health of the economy, the increased openness of the labor market and legitimate market operations throughout the economy will help or hinder the social impacts brought on by restructuring Romania's generation sector.

Special Privileges. Some special provisions regarding the women (e.g., pregnant) and young workers are included in the labor laws. Work condition restrictions include not working late at night, in strenuous conditions or unhealthy environments. Women are entitled to paid maternal leave for 63 days and after birth, 63 paid days. During this period the employee's position in the company must not be changed in any way. One parent is entitled to leave until the child is two years of age. In this instance, the salary received is 85% of the average income during the last six months before leaving, provided that contributions to the Social Security Fund were paid.

III. Key Social Issues

The reluctance of social partners within the power sector has been identified as a key reason for slow reform of the sector. This reluctance can be expected and addressed by promoting full participation and information among the various stakeholders of this reform process. Based on the generally negative experience of Romania's mine sector reform program, concerns of these social partners, in particular, trade unions, is not unfounded. Still, the initial findings of this assessment reflect that the Government of Romania can predict certain social impact issues relevant to privatization and sector restructuring now, identify key steps to take to minimize impact and develop measures that will mitigate impacts. In brief, three primary social impacts are addressed: (1) Unemployment of sector workers; (2) Reduced wages and benefits of sector workers; and (3) Increased electricity tariffs. Some review of ancillary workers should also be conducted.

Assuming a scheme of legitimate market operation implies disciplined management, financial health, risk management (e.g., hydrological risk, fuel costs), and, because Romania on the whole is amidst transition, adequate social protection of the elderly, poor, isolated and other "hot spot" populations must be in place. New concerns for environmental protection must also be considered.

¹³⁵There are two IPPs that the Dutch are attempting to operate but that they are not yet formally IPPs. Two bids have been organized for industrial cogeneration in Govora.

A. Unemployment

1. Status

According to Termoelectrica records, 25,596 people are employed by the company. There is concern that many plants only operate five months per year and estimates that with restructuring, Termoelectrica employment for workers will be reduced to 18,000-19,000 workers. There is no published plan that could be reviewed; more information on this estimation of lay-offs is required from Termoelectrica via plants. In Romania's generation sector, since 1998, it is estimated that 7,000 workers have lost their jobs. It does not appear that any tracking of these unemployed workers, including the reasons for their lay-offs (e.g., plant close-down) was conducted. Under phase one of restructuring Termoelectrica, 2,448 workers have already been "transferred" to alternative work sites.

A plan to close non-viable plants was developed for the sector two years ago with three categories of plants:

1. plants that have future for small investors.
2. plants that are not efficient or economic but are needed for heat.
3. plants that have no future and should be closed.

2. Retirement

National law dictates that the legal age for entitlements to retire will change to 65 years for men and 60 years for women. This age will be applied starting in 2014 with an initial increase in the retirement age of 62 years for men and 57 years for women, effective as of 2000. The pension law includes an age/gender table.

3. Worker Wages

The average wage for generation workers is \$USD200 - \$250 per month. Importantly, the wage is consistent per labor category throughout the country without regard to cost of living in various regions. Commencing in 1998, Ordinances 9 and 36 earlier addressed the issue of industrial unemployment in Romania. Due to geographic location and its restricted labor market, Moldova is anticipated to be the most difficult region in terms of anticipated redundancies.

4. Labor Contracts

A collective bargaining agreement is in place between the Government (MIR) and unions. Each plant bargains a contract per local union. In some cases, the local contracts are directly between the worker and MIR as key negotiator where the plant is a "Regie". Significant distinction is given between staff management and workers. At present, labor contracts are negotiated at the

Termoelectrica Employees

Boiler Operators	311
Electricians	3700
Engineers	1756
Lab Operators	703
Legal	40
Locksmiths	3830
Other	5319
Other High School Degrees	803
Other Service Operators	2134
Other University Degree	115
Plant Managers	1534
Sub-Engineers	432
Technical Operators	423
Turbine Operators	1499
Water Treatment Operators	881
TOTAL	25,596

Information from Hidroelectrica was not received.

plant and for the most part are similar in nature. However, there are important clauses that are included in these contracts that are counter to true market operations – e.g., “no employee will lose his/her job for five years”. By past accounts in other sectors in Romania, it will be difficult to amend these types of provisions. At present, collective contracts were negotiated at different times of the year, prior to the approval of the national budget. Now, a new regulation requires that MIR must approve the budget before contracts are concluded, per IMF and World Bank conditions.

The legal requirements for employment are stipulated in the Labor Code and the National collective labor contract for 2001-2002, applicable both to the State companies and to private companies. There is not a specific collective labor contract for the energy sector. The particular conditions of employment are set through the individual labor contract, generally these are open-ended contracts with no end dates although several provisions on “at least the next XXX years” are applied. These contracts can legally be concluded for a determined period including for temporary employment. There is no lifetime employment requirement, but individual dismissal must be based on legal basis.

5. Severance

Government Emergency Ordinance no. 98/1999, as subsequently amended, provides guidance on certain protection measures for those whose individual employment contracts will be terminated due to collective dismissals, as a result of restructuring, privatization and liquidation.

Collective dismissal means the lay-off, within 60 calendar days, of a certain number of employees, as follows:

- 1) at least 10 employees, in companies employing 20 to 100 persons;
- 2) at least 10% of the staff, in companies employing 101 to 300 persons;
- 3) at least 30 employees, in companies employing more than 300 employees.

The ordinance also applies to restructuring, provided that it is based on a restructuring program, which must be approved either by the competent public authorities (in case of companies where the state holds at least 1/3 interest in the share capital, as well as national companies, regies autonomes, commercial companies and other entities under the authority of the central or local public administration), or by the relevant Employment Agencies within the Labor and Social Solidarity Ministry, in all other cases.

Here, “social protection” in case of redundancy consists in compensatory payments, pre-dismissal services (consultancy, information, professional reorientation, relocation of staff) and various active measures mitigating unemployment. Moreover, commercial companies that made collective dismissals under restructuring programs may benefit, upon request, of financial support for economic recovery and re-launching activity, provided by these programs. According to the ordinance, the aggregate amount of money granted as compensation is set individually for each redundant employee and is equal to:

- 1) 6 average wages per entity for employees with less than 5 years seniority;
- 2) 9 average wages per entity for employees with 5 to 15 years seniority;
- 3) 12 average wages per entity for employees with more than 15 years seniority.

In order to receive compensatory payments, employees must have been employed for a minimum of 6 months with the employer before being made redundant, during the last 12 months prior to dismissal. These amounts are paid from the Fund for Unemployment Aid managed by the State.

6. Role of Trade Unions

Unlike most of the former Soviet Union and certain Central and Eastern European trade union settings, Romanian trade unions here are primarily concerned with the affairs of employed power sector workers that may lose employment. They are not concerned with workers who have already lost their jobs. This fact provides managers with an opportunity to conduct appropriate pre-redundancy measures prior to lay-offs and to include in its new schemes for restructuring and/or privatization, measures to address the needs of the newly unemployed. A national union was created in the wake of mine restructuring to target this issue. Once workers become unemployed, they are eligible to become members of the Confederation of Unemployed Workers that participates in legislative drafting and various ministerial commissions addressing redundancy. Depending on the extent of proposed redundancy in the power sector, it would be likely that a similar union could emerge in this sector. In theory, the infrastructure to support newly unemployed from the generation sector would have several options:

- 1) Transfer of redundant workers to new or existing plants in the area;
- 2) Natural attrition would lead to some percentage of retirement and early retirement if adequate financial support in place;
- 3) Receipt of state severance for certain period of time.

The main issues will be: (1) how far the State is willing to engage in the unemployment issue; (2) the locations of the unemployed; and (3) the transferable skills of the newly unemployed.

On the whole, Romania's power sector employees are well educated and their skills are transferable. The constraint in Romania is a highly restrictive labor market where opportunities for new growth have been minimal.

7. Energy Fund for Development

MIR maintains a Fund for Energy Development supported via tax levied on electricity; another tax on heat is levied. This fund is managed by MIR and totaled 4.5 trillion lei last year. The fund can be used for any energy sector issue. The tax is included in the State budget and expenditures under this tax, listed in law.

B. Sector Employee Wages and Benefits

In a real market setting, considerable changes to the compensation packages of both workers and managers will need to be made. Coupled with the “balance sheet” issues of accounting for wages and benefits (e.g., free electricity, cars, etc.), workers wages have not kept up with the new economy while manager salaries continue to increase exponentially.

Although difficult to predict with certainty, based on other restructuring in Romania including the transition of CONEL to commercial entities that included Termoelectrica and Hidroelectrica, it is very likely that some workers will not lose their jobs but will experience reduced wages and benefits. It is expected that in the coming year, a variety of state company activities will be outsourced; this will either result in job losses or decreased wages and benefits. A close assessment of the ramifications of this is required, starting with an honest overview of what workers and managers actually receive as their overall package for compensation. Consideration should be given to assisting workers now engaged by the state company to start up private operations that could be tapped for outsourcing (e.g., billing and collection, maintenance).

Wages and salaries are not connected with MIR input except as far as they are connected with a company budget that is approved by the Government. MIR does approve company budget levels per year but the salary level is said to be a matter of negotiation, for the most part, between plant management and unions. Collective contracts include basic wages and bonuses including holidays (e.g., “Energy Day”) and other incentives such as non-wage benefits. These include safety equipment, transportation to and from work and other items. All Termoelectrica workers receive free electricity up to a certain annual limit of 3,000kw. To formulate this cost, a formula is suggested: lei per kw x number of workers x annual limit.

C. Increased Tariffs

In order to improve financial sustainability of utilities, household tariffs will be raised to reflect the high cost of supplying low voltage electricity. (1) With the increase, it will be important to monitor increased use of fuel wood, diesel generators and gas. There are environmental concerns with the use of fuel wood as well as dangers with use of fuel wood and the generators, notably in traditional Romanian apartment units. (2) Also with the increase will likely come a decreased ability of collection and increase in arrears – here the social implications will increase as Romania no longer maintains any “turn off” security for non-payments. (3) It is predictable that poor households will reduce consumption. The irony may be that even with non-payments increasing, the utility may expect an increase in revenues.

In Romania, electricity prices have consistently been raised over the past year; but it is important that any increase is well publicized and explained. Tariffs must balance utility cost recovery with service delivery and affordability.

In Armenia when prices for electricity increased 30%, the population accepted the change as part of market reform; however, when a change of 47% in pricing was proposed, people were shocked and not willing to accommodate the new market. (1999)

Successful privatization will depend on the sector's ability to provide services that are reliable and affordable. Because up to 40% heat in Romania is provided through cogeneration power plants, it is critical that pricing mechanisms are in place to assure affordability and sustainable sector operation. More data will be collected to assess the estimation of new prices under different scenarios in the coming years.

The Economic Department at Termoelectrica maintains a formula to calculate costs, presented to ANRE to justify price. Significant plans exist to build new plants that are expected to impact prices; Termoelectrica believes current prices are at least 30% below real cost. Electricity prices have no reference to any type of subsidy scheme. Heat prices are particular to each company that delivers heat; these companies negotiate the prices to be agreed to by ANRE.

Estimating heat and electricity costs are difficult; annual differences are part of the calculation. Heating cost/price is estimated by Termoelectrica. Electricity costs are evaluated by ANRE and OPCOM, the Commercial Operator. There exists considerable tension between seeing electricity as a public service and as a commodity. Costs of non- and delayed payments are not included in price formulation but directly impact Termoelectrica's liabilities (e.g., interest to be paid on outstanding loans).

There exist important differences in price calculation for residential, business and industry. In electricity, there is no transfer of subsidies between industry and residential; in the end, it is cheaper for industry to operate than residential. Electrica carries substantial debt on its books for non-payment of electricity costs. Of that amount, 80% is owed by enterprises and 20% is owed by residential customers.. Distribution companies are violating contracts with Termoelectrica by not paying amounts due; this is attributed to the fact that the local governments should be contributing to payments and cannot; therefore, distribution companies use additional funds to cover these costs.

Termoelectrica has brought some cases to court and won. Here, the distribution company is told by the court to either pay past debts or to declare bankruptcy. The issue remains that a local company can not declare bankruptcy as "the only game in town". One case that came close to resulting in bankruptcy (a sugar company in Timisoara) was stopped with Government intervention – apparently, politics has intervened in several instances.

It is estimated that heat payments are delayed 6-7 months. Decision of ANRE no. 4 of 2000, regulating the non-payment problem, indicates that certain entities cannot be turned off, despite failure to pay. Entities that cannot be turned off at any time during the year include schools, hospitals, kindergartens, homes for the elderly. Other entities cannot be turned off during the winter months only.

Electrica is the largest customer for Termoelectrica and at least 2 months delayed in payments. Both Electrica and Termoelectrica are under the auspices of MIR of Industry and Resources.

Termoelectrica managers note frustration with serving 20 towns using the same price, despite costs of service. Approximately 100 private suppliers receive special prices per plant and are provided more flexible pricing options than Termoelectrica. State assistance for the poor and differing certain consumer categories are available but are the responsibility of the municipality.

For heat, because the reference price does not sufficiently reflect cost, the municipality is to cover the excess cost. However, due to lack of tax and other revenues at the local level, the local governments are unable to cover many of the costs. The final price is split among local distribution companies.

In the end, determination of prices is strongly guided by ANRE with inputs from MIR. ANRE's mandate includes emphasis on using indigenous and clean fuels.

IV. Initial Recommendations

A. Unemployment and Salary Reduction Mitigation Measures

In order to deal with the social dislocation that will be caused by privatization of generating sector assets, we recommend that a stabilization fund be created by setting aside USD \$50-\$70 million out of the proceeds received from the sale of assets. The stabilization fund can be used to support:

- early retirement buyouts for older workers
- retraining programs for younger displaced workers
- depending on seniority, up to 24 months of base salary for severance payments to assist workers and their families in making the transition to a new job or field of endeavor
- the creation of new jobs in related service industries
- micro-loans to affected workers to start up new small businesses
- job placement.

In order to gauge the need for, and likely success of, each of these programs, additional information will be required from the Government to estimate the scope and likely impact of workers redundancies and salary reductions. They include: employment data by age, labor category, salary, plant, non-wage benefits (e.g., free heat and electricity) and bonuses. A possible model for assessing labor impacts can be developed by looking at the percentage of layoffs occasioned by privatization in other government-owned sectors or in the energy sectors of other countries in the region with similar labor profiles.

B. Tariff Increase Mitigation Measures

Anticipated tariff increases need to be addressed by identifying:

- Current cash collection rates by customer class, geographic region and by rural vs. urban locations.
- Current consumption rates by customer class, geographic region and by rural vs. urban locations.
- Current commercial losses by geographic region and by rural vs. urban locations.
- Current government subsidies by customer class, geographic region, and by rural vs. urban locations.

Once this data has been evaluated, tariffs can be designed targeted to the most vulnerable segments of the population so as to mitigate the impact of increases due to privatization. Any such mitigated measures should be undertaken in conjunction with other improvements in the tariff methodology designed to ensure a properly functioning competitive wholesale market.

SECTION VII

Environmental Review of Existing Thermal Generation Assets

I. Overview Of Environmental Regulations In Romania

A. Air Pollution Decision Making Bodies

The following Romanian Ministries are responsible for regulating air pollution.

- The Ministry for Waters, Forests and Environmental Protection (MWFEP), responsible for environmental policy (energy-related aspects of the atmosphere) and legislation;
- The MIR responsible for policy and legislation on amongst other things energy, fuel quality and petrol distribution and storage;
- The Ministry of Health (MOH), responsible for deriving air quality standards to protect human health; and
- The Ministry for Transport (MOT), responsible for policy and legislation on transport including emissions.

MWFEP is also the competent authority for meeting international requirements in the field of environmental protection. MWFEP was established around the country's 42 Environmental Protection Agencies (EPA) in each county according to the Romanian territorial development plan.

B. Energy Sector Decision Making Bodies

The Ministries with coordinating responsibility for energy issues in Romania are:

- MIR — responsible for policy and legislation on amongst other things energy, fuel quality and petrol distribution and storage;
- MWFEP — responsible for environmental policy related to energy-related aspects of the atmosphere and for related legislation;
- MOH — responsible for deriving air quality standards to protect human health; and
- MOT — responsible for policy and legislation on transport including emissions.

The Environmental Protection Law 1995 (EPL 137/1995) deals with “Atmospheric Protection” and establishes the MWFEP as the competent authority for promoting regional and global policies in the sector. It also establishes the main duties of the MWFEP including the duty to make and enforce regulations. The law places general obligations on natural and legal persons towards air protection and establishes penalties for non-compliance. Other applicable environmental laws are follows:

- Law no. 14/1997 ratifying the Energy Charter Treaty and Energy Charter Protocol regarding energy efficiency and environment-related aspects;
- Law no. 24/1994 ratifying the Framework UN Convention on Climate Change signed at Rio de Janeiro on June 5, 1992;
- Petroleum Law no.134/1995;
- Mining Law no.61/1998;
- Waters Law no.107/1996;
- Law no.111/1996, revised in 1998, regarding nuclear activity safety, as republished;
- Governmental Emergency Ordinance no.63/1998 regarding electricity and heat;
- Law no.136/1994 regarding the founding of a Special Fund for Development of Energy System;
- Law 119/2000 for energy efficient use;
- Governmental Decision 1275/1996 on the National Commission for Climate Change;
- Governmental Decision 573/2001 regarding energy labeling for domestic refrigerators;
- Governmental Decision 489/1998 on the approval of an Action Plan for Decrease of Lead Content of Gasoline;
- Ministerial Order 756/1997 on the approval of the Regulation for Environmental Pollution Assessment;
- Ministerial Order 462/1993 for approval of the Technical Conditions for Atmospheric Protection, Methodological Norms on Polluting Emissions from Stationary Sources;
- STAS 12574/87-Air Quality in protected areas;
- SR 176/1997 – Motor oil lead less gasoline[?]; and
- SREN 590/1997 – Diesel Motor Oil;

Environmental Law 137/1995 calls for detailed environmental impact assessments and issues permits for the following energy sector related facilities:

- Nuclear energy production installations, self-sustained nuclear reaction installations (research reactors), installations for nuclear fuels extraction and production, and other installations generating ionizing radiation
- Thermal installations for the production of an energy of more than 10 Mw
- Hydroelectric plants with a power of more than 1 MW
- Geothermal installations, including those which exploit underground water heat
- Gas plants, coke plants, coal liquefaction installations

- Prospecting, exploration and exploitation of oil, natural gas or coal, and of other mineral resources, including those from the sea.

In addition to the above, the Government of Romania has issued E.O. No.34/2002 on Pollution Prevention, Reduction And Integrated Control. This emergency ordinance draws up the necessary measures to prevent or, when this is not possible, to reduce air, water and land emissions from specific industrial and commercial activities.

II. Sources Of Air Emissions

Air emissions from a thermal power plant are directly related to the quantity and type of fuel burned. Table 1 shows data on the primary combustion fuel and the type of air pollution control equipment installed at each of the 18 Termoelectrica thermal plants.

Table 1
Combustion Fuel and Emission Control Equipment

Plant#	Plant	Country Location	Fuel Primary/Supplement	Air Pollution Control	Installed Capacity (MW)	
					Elec.	Thermal
1	Borzesti (condensing)	Center	OIL/GAS	NONE	420	
2	Braila (condensing)	S-E	OIL/GAS	NONE	960	135
3	Bucuresti Sud	South	OIL/GAS	NONE	550	2905
4	Bucuresti Vest	South	OIL/GAS	NONE	250	1002
5	Grozavesti	South	OIL/GAS	NONE	100	894
6	Bucuresti "Progresul"	South	OIL/GAS	NONE	200	955
7	Bucuresti "Titan"	South	OIL/GAS	NONE	8	309
8	Palas	East	OIL/GAS	NONE	250	1282
9	Craiova	S-W	COAL/GAS	ESP	300	995
10	Mintia (condensing)	Center	COAL/GAS	ESP	1260	270
11	Doicesti (condensing)	Center	COAL/OIL	ESP	400	90
12	Galati	S-E	OIL/GAS	NONE	535	1006
13	Isalnita (condensing)	S-W	COAL/GAS	ESP	630	582
14	Iernut (condensing)	Center N	GAS	NONE	800	-
15	Paroseni	Center	COAL/GAS	ESP	300	296
16	Brazi	S	OIL/GAS	NONE	710	2147
17	Rovinari (condensing)	S-W	COAL/OIL	ESP	1320	-
18	Turcenii (condensing)	S-W	COAL/OIL	ESP	2310	-
	TOTAL CAPACITY				11,303 MW	12,868 MW

Notes:

1. ESP – Electrostatic Precipitators for capturing particulate emissions
2. None of the plants is equipped with acid gas scrubbers, lime injection, NO_x control or continuous emission monitoring systems (CEM) systems
3. Indigenous hard coal and lignite have a relatively high sulfur content.

Termoelectrica did not provide any information on the physical or chemical characteristics of the feedstock coal, oil, or gas fuel. Therefore there is insufficient data to estimate acid gases, carbon dioxides, nitrogen oxides or other air emissions into the atmosphere. Table 1 shows that only the coal fired plants are equipped with ESPs for capturing about 98% of the fly ash before its emitted from the stack to the atmosphere.

Termoelectrica is seeking to implement a phased schedule for reduction of acid gases and NOx emissions. Termoelectrica is seeking relief from the new national environmental directives and ordinances and is expecting a phased schedule as follows:

For Sulphur Dioxide Reduction

By 2004 – 40% decrease

By 2007 – 50% decrease

By 2012 – 70% decrease

By 2015 – Best Available Control Technology (BACT) and full compliance with EU Standards

For NOx Control

By 2007 – 20% decrease

By 2012 – 70% decrease

By 2015 – BACT and full compliance with EU Standards

Based on all the new government directives and environmental ordinances it is quite likely that private investors may have to incorporate EU standard emission control technology at a much earlier date than the phased approach assumed by Termoelectrica.

III. Soil And Groundwater Pollution

E.O. No. 34 issued on March 21, 2002, states:

The emergency ordinance has as its objective an integrated approach of necessary measures to prevent, reduce and control pollution, as well as the necessary measures for granting integrated environmental authorizations for the industrial activities.

This emergency ordinance calls for prevention, when this is not possible, to reduce air, water and land emissions so that a high level of environmental protection is reached in accordance with the legislation and the mandatory international agreements that Romania has signed.

The timetable for finalizing and complying with all environmental regulations and being at par with EU standards is year 2015. Effective 2015 the facilities that do not satisfy the requirements of this emergency ordinance will be shut down.

In addition, G.D. No. 162, dated February 20, 2002, establishes the legal framework for waste disposal activities including development, exploitation, closure and post-closure activities. Compliance with this regulation will result in improved quality of the environment, especially of

the surface, and underground waters, land and air pollution, both during operation and upon closure of the landfill.

These environmental Ordinances and regulations are the first in Romania and designed to eventually comply with EU environmental regulations. However, Termoelectrica is requesting a phased approach and a relatively longer schedule (year 2015) to comply with and meet all EU environmental standards.

Table 2 identifies the fuel used by each Termoelectrica plant and the ash generation facilities.

Table 2
ASH GENERATION FACILITIES

Plant#	Plant	Fuel Primary/Supplement	Ash Generation
1	Borzesti (condensing)	OIL/GAS	Negligible
2	Braila (condensing)	OIL/GAS	Negligible
3	Bucuresti Sud	OIL/GAS	Negligible
4	Bucuresti Vest	OIL/GAS	Negligible
5	Grozavesti	OIL/GAS	Negligible
6	Bucuresti "Progresul"	OIL/GAS	Negligible
7	Bucuresti "Titan"	OIL/GAS	Negligible
8	Palas	OIL/GAS	Negligible
9	Craiova	COAL/GAS	12%-25% of Coal Feedstock
10	Mintia (condensing)	COAL/GAS	12%-25% of Coal Feedstock
11	Doicesti (condensing)	COAL/OIL	12%-25% of Coal Feedstock
12	Galati	OIL/GAS	Negligible
13	Isalnita (condensing)	COAL/GAS	12%-25% of Coal Feedstock
14	Iernut (condensing)	GAS	Negligible
15	Paroseni	COAL/GAS	12%-25% of Coal Feedstock
16	Brazi	OIL/GAS	Negligible
17	Rovinari (condensing)	COAL/OIL	12%-25% of Coal Feedstock
18	Turceni (condensing)	COAL/OIL	12%-25% of Coal Feedstock

Notes:

1. Romanian Lignite from the Oltenia basin typically has an ash content of 23% to 28%
2. Romanian pit coal typically has an ash content of 15% to 18%
3. Imported hard coal from Russia and Ukraine has an ash content of about 12%
4. Ash includes both fly ash and bottom ash

The seven coal fired plants are the largest ash generators. Termoelectrica estimates that, based on current electricity demand, about 5 million to 6 million tons of ash per year are generated in Romania. Termoelectrica's traditional method for ash disposal is depositing it in piles near the plants. Under existing Termoelectrica operations these piles are allowed to reach a height of about 40 meters. Presently, these ash piles are not only an eyesore but also result in surface and groundwater contamination, while fugitive dust from the ash pile contributes to air pollution.

Addition of new emission control equipment will result in additional scrubber of other hazardous waste residues that will need to be managed in accordance with all applicable hazardous waste management laws.

IV. Kyoto Agreement And Emissions Reduction

In October 1990 the EU committed itself to holding its year-2000 CO₂ emissions at or below their 1990 level. It formalized the commitment when it signed the UN Framework Convention on Climate Change (UNFCCC) in June 1992.

The 1997 Kyoto Protocol to the UNFCCC will control industrialized countries' emissions of carbon dioxide (CO₂), methane (CH₄) and nitrous oxide (N₂O), plus three fluorinated industrial gases: hydro fluorocarbons (HFCs), per fluorocarbons (PFCs) and sulphur hexafluoride (SF₆). The EU is responsible for around 24% of industrialized countries' man-made emissions of the six gases. The EU hopes the Protocol will receive enough ratifications to enter into force by the time the UN World Summit on Sustainable Development takes place in September 2002 in Johannesburg.

A "burden-sharing" agreement between EU governments lays down differentiated emissions limits for each Member State with the aim of ensuring that the EU meets its overall 8% reduction commitment under the Protocol. The limits are expressed in terms of percentages by which Member States must reduce, or in some cases may hold or increase, their emissions compared with the base year level (1990).

The base year inventory was compiled from data provided by Member States and quality-checked for the European Commission by the EEA. The Commission has submitted it to the Secretariat of the UNFCCC. The inventory is published as EEA Technical Report No 75 and titled Annual European Community Greenhouse Gas Inventory 1990-2000.

Under the Kyoto Protocol the EU is required to cut its combined emissions of the targeted six gases to 8% below their 1990 level by the years 2008-2012. The latest inventory shows that in 2000 total EU greenhouse gas emissions stood 3.5% below their 1990 level. In 1999 they had been 3.8% lower, according to the most recent estimates.

The EU is slightly less than half way towards reaching the target, with just over half of the time gone before the Protocol's first compliance period starts in 2008. One of the main reasons for the overall emissions rise from 1999 to 2000 was a 2.4% increase in CO₂ emissions from electricity and heat production, due in part to an expansion of power generation from fossil fuels, especially coal, in the UK, the EU's second-largest emitter.

A. Analysis of Potential Greenhouse Gas Benefits from Efficiency Upgrades of the Romanian Electric Power Sector

Romanian hot air associated with the electric power and district heating sectors during the 2008 – 2012 period is estimated to amount to around 80 million metric tonnes of CO₂ (mtCO₂). Hot air is defined as reduction of CO₂ emissions resulting from economic slowdown.

Common efficiency upgrades of power plants, electric distribution systems, district heating boilers, and district heating distribution systems have the potential to realize emissions reduction units (ERUs) amounting to approximately 30 million mtCO₂ during the 2008 – 2012 period. ERU credits are based solely on efficiency upgrades.

Therefore, by the time period 2008- 2012 Romania has the potential of reduction in emissions of about 17% relative to business as usual.

The 110 million mtCO₂ sum of hot air and ERUs over the 2008 – 2012 period (22 million mtCO₂ per year on average) represents about 3% of the 700 million annual global reductions that are estimated to be necessary to meet the goals of the Kyoto Protocol.

At a price of 0.75 US\$/mtCO₂ for hot air and 5 US\$/mtCO₂ for ERUs, 110 million mtCO₂ would have a value of US\$210 million over the 2008 – 2012 period.

Attached as Appendix B to this Section 7 [is this OK, we did not find any Appendix D to section 8?] is a presentation showing the potential benefits to potential strategic investors of an emissions trading program.

B. Kyoto Estimated Baseline Emissions for Romania

Kyoto Protocol 1990 baseline emissions for Romania are estimated to be 5.9 million mtCO₂ for the district heating sector and 50.5 million mtCO₂ for the electric power sector. Since Romania has a commitment to reduce its emissions by 8% relative to 1990, the emissions targets for the district heating and power sectors are 5.5 million tonnes/year and 46.4 million tonnes/year respectively.

Extrapolating year 2000 data back to 1990 the following values were derived. The updated year 2001 Kyoto Protocol states that Romanian emissions fell by 40% from 1990 to 2000 due to the shrinking economy.¹³⁶ Our analysis made the simplifying assumption that power sector emissions dropped at the same rate as emissions from the overall Romanian economy (about 7% per year). A further simplifying assumption was made that the district heating sector emissions dropped at a slower rate (about 2% per year), reflecting the expectation that domestic hot water usage and building space heating are relatively insensitive to changes in economic activity.

Significant changes have occurred since Romania signed the Kyoto agreement. There has been a substantial decrease in energy demand and some facilities have been shut down. Therefore the

¹³⁶ Source: ERU-PT 2000 Emission Reduction Unit Procurement Tender, Municipal Cogeneration Targoviste, Romania, Baseline Report, February 11, 2001

data presented here are estimates and a study based on actual plant operational information will provide more reliable emission reduction information.

V. Conclusions And Recommendations

A. Conclusions

- Air Emission and hazardous waste management laws are very new in Romania and the regulations have yet to be implemented and enforced. In fact, Termoelectrica is seeking a phased approach and relief from EU regulations until the year 2015.
- Ash residue and waste management regulations have been recently drafted and not yet enforced.
- The Government of Romania is a signatory to the 1990 Kyoto agreement. Under this agreement Romania agreed to cut emission of six targeted gases by 8% using 1990 as the baseline. This has been achieved just by the significant reduction in electricity demand since 1990.
- From a Kyoto Protocol standpoint, and because Romania has achieved more than the required 8% reduction in emissions, it is in a position to sell its emission credits to other countries.
- Private investors in Romania could incorporate efficiency upgrades, further reduce emissions, and sell the ERUs to enhance project financing.
- New regulations require that all new thermal and hydro power plants must complete an environmental assessment report as part of their permitting process.
- Presently, the coal-fired power plants are equipped with Electrostatic Precipitators for capturing particulate matter before it is released from the stack to the atmosphere.
- No thermal generation plant including the coal-fired plants are equipped with any acid gas control, NOx control, or any other type of pollution control equipment.
- Ash and other plant residues are disposed of in piles near the plants. Leakages from these piles are a source for contamination of surface water and groundwater. Presently, Termoelectrica has no plans for management of the ash piles in an environmentally friendly manner.
- As the Government of Romania has very recently drafted new environmental laws and regulations it is prudent to assume that all new private investors will be subject to compliance with existing laws and regulations. Risks for a private investor include poorly defined, conflicting, or future changes in environmental laws.

B. Recommendations

All Kyoto emission reduction accords and agreements are sponsored and regulated government to government. Therefore, the GOR is advised to assist any private investor that can demonstrate emission reductions resulting from rehabilitation, modification, or incorporation of new

equipment. Such emission reductions can be sold to other countries that have not met their emission reduction requirements. Typically, emission reduction is calculated on an annual basis and then sold as a revenue stream over a defined period of time. This additional revenue from sale of emission reduction credits assists in a lower operational cost and makes the purchase of thermal power plants more attractive to prospective investors. The GOR should therefore explore the feasibility of offering such ERUs to potential buyers as an added inducement to bid.

SECTION VIII

Suggested Privatization Implementation Schedule

The GOR needs to agree on a strategic framework for power generation privatization that addresses the needs of Romanian consumers, the power generation sector, employees, and strategic investors. The Hunton & Williams Team has provided this strategic framework through Phase I of our technical assistance project. Two additional phases of technical assistance to the GOR will assist in achieving measurable results in this area.

I. Phase II -- Privatization Preparation

The GOR is not currently prepared to begin the implementation phase of its generation privatization program and requires additional assistance to prepare individual generation companies for success in the private sector. The next phase of this effort should include a more detailed analysis of individual generation enterprises and preparation of the supporting materials necessary for the actual privatization phase of the GORs strategy. Our recommended objectives of Phase II include:

A. Financial Review and Valuation

- A thorough financial review of individual generation facilities owned by Termoelectrica and Hidroelectrica to evaluate their suitability for privatization;
- Development of preliminary valuations for privatization purposes that can be analyzed by the GOR;
- Preliminary consolidation of financial information to reflect indicative asset bundles being offered for privatization;
- Preliminary restatement of financial information into internationally recognizable accounting format;
- Summary of tariff policies, supply contracts and pricing guidelines that will be applicable to a new owner following privatization;

B. Technical Verification

- Verify technical capabilities of individual generation companies included in first privatization through on-site verification and summary of previously collected information;
- Reporting on environmental upgrades and emission standards needed for first group of privatization assets;
- Assess viability of bundling related facilities (e.g., mines and services companies) with generation assets to be privatized;

C. Tariff Impact Analysis and Pricing Structure

- Development of a detailed tariff impact analysis relating to each privatized bundle, including the potential structure of and parties to off-take agreements;
- Review of any government subsidies or past payments applicable to privatization assets that will be eliminated in the future;
- Summary recommendations and justification if any tariff increase will be necessary;
- In conjunction with ANRE, design an equitable means of allocating portfolio contracts from the two electric distribution companies to be privatized in 2002 and from Electrica to the newly privatized generating companies; any allocation of contract rights must ensure both that the privatized generating bundles receive a secure revenue stream and that the privatized electric distribution companies receive a secure power supply;
- Recommend the structure and timing for any tariff schedule following privatization;

D. Transaction Structure and Term Sheets

- Develop conclusions on the optimal privatization structure for the first privatization that will be offered by the government (trade sale, share increase, etc.);
- Determine the optimal percentage of shares to be sold to private investors that will maximize valuation and speed;
- Develop term sheets for this transaction that are quite specific in the allocation of roles, responsibilities, and risks among the various parties that will be involved in privatization of the first asset bundle;

E. Social Disposition Funds

- Evaluate Romanian legal framework to determine the type and structure of funds that would be allowed under current law;
- Establish a framework for social disposition funds, and draft guidelines for the implementation of these funds;
- Summarize program options available to the GOR for mitigating social disruption from privatization, including: worker retraining, job placement, micro-loans, contributions to health care and insurance funds,
- Determine a strategy to be given to the GOR for distributing proceeds from the social displacement funds directly to impacted workers or through government programs;

F. Structuring of Privatization Bundles

- Establishing final recommendations on the composition of asset bundles for the first privatization offering;
- Presenting recommendations on bundle allocations to appropriate GOR constituents and addressing concerns of impacted stakeholders;
- Analyzing and confirming available and potential generation capacity within each privatization bundle;
- Site visits to generation facilities allocated to first bundle to validate and revise as necessary all technical and financial data related to these assets;

G. Transaction Documents

- Draft model purchase and sale documents for use in transferring ownership of thermal power generation assets to the first bundle to be privatized
- Draft model lease and concession agreements for use in transferring operation responsibility for hydro units to be made available in the first asset generation bundle

H. Emissions Trading and Environmental Compliance

- Draft model emissions trading structure to provide added incentives to refurbish existing plants or otherwise reduce carbon emissions

The steps outlined above will sufficiently prepare the GOR to enter the implementation phase on the first bundle or group of assets targeted for privatization in the generation sector. The implementation can begin with the Phase III technical assistance outlined below.

II. Phase III – Privatization Implementation

If the GOR ultimately decides to proceed with the privatization of certain power generation assets, there are several steps that can be taken to increase the chances of success. This phase will begin the actual privatization of generation assets and will provide the GOR with all necessary tools to identify and contact appropriate strategic investors, provide necessary due diligence materials required by investors, and oversee a process that will lead to a completed transaction in a manageable time frame. The major elements of Phase III that are consistent with international practice include the following activities:

- Develop bid instructions to be shared with potential investors;
- Prepare a detailed information memorandum that summarizes the assets to be privatized, relevant legal and regulatory conditions, and investment considerations and reasons that make the opportunity attractive to a strategic investor;

- Prepare a detailed technical analysis of the first bundle, including production information and growth potential related to the domestic and export markets;
- Build a financial projection model that forecasts the expected profits and investment requirements of the first privatization bundle for the next five years, including a proposed financing structure to complete the privatization.
- Research and identify of all qualified strategic investors to be contacted;
- Develop contact documents, non-disclosure agreements and supporting materials necessary during the privatization process;
- Develop the data room of materials that will be reviewed by strategic investors;
- Establish a time schedule and process for managing the first privatization transaction;

III. Measurement of Impact Indicators

The objectives in Phases II and III would be to develop a strategy and framework to help the GOR achieve the following results through the initial privatization transaction:

- Structure a transparent privatization process that could be understood by investors and the citizens of Romania.
- Develop a privatization methodology that attracts all qualified investors in the process.
- Allow the GOR to report that the privatization had generated maximum investor interest without showing favoritism towards any single investor.
- Accelerate the completion of the first power generation sector privatization.

The design of Phases II and III outlined above would rapidly accelerate energy generation privatization in Romania and facilitate much needed competition in the electricity generation sector. Furthermore, each phase would increase the probability of a successful privatization by providing the information required by investors to evaluate the opportunity in Romania and prepare a qualified investment offer.

Appendix C
Privatization Transactions By Country
(amounts in US\$ millions)

Country	Company	Sector	Share Sold (%)	Sale Amount	Financial Notes	Purchaser(s)
Albania	Electricity Distribution, Vlore	Electricity	30.0	\$1.4	Auction	Local investor
Albania	Electricity Distribution, Elbasan	Electricity	30.0	1.3	Auction	Local investor
Argentina	Edesur	Electricity	39.0	390.0	Direct sale	Foreign investor
Argentina	Empresa de Energia de Mendoza (Edemsa)	Electricity	51.0	237.7	Direct sale	Foreign investor
Argentina	Atlantic area electricity distribution	Electricity distributor/power	na	404.6	Private sale	Local investor
Argentina	Hidroelectrica Tucuman S.A.	Power	98.0	4.6	Direct sale	Local investors
Argentina	Energia de Rio Negro	Power	na	98.0	Direct sale	Local investor
Argentina	Hidrotermica San Juan S.A.	Power	98.0	12.3	Direct sale	Foreign investor
Argentina	Companhia Electrica de Salta	Power	60.0	45.0	Direct sale	Foreign investor
Argentina	Empresa Jujena de Energia	Power	90.0	46.1	Direct sale	Foreign investor
Argentina	Electricidad de la Plata	Power	39.0	55.0	Direct sale	foreign investors
Argentina	Edenor	Power	19.5	157.0	Direct sale	Foreign investor
Argentina	Empresa de Distribucion de Electricidade de Entre Rios	Power	90.0	160.9	Direct sale	Foreign investor
Argentina	Empresa Electrica San Juan	Power	na	63.3	Direct sale	
Argentina	Luis Piedrabuena de Bahia Blanca plant	Power	na	30.3	Private sale	Foreign investor
Argentina	EDEN and EDES	Power	na	565.0	Private sale	Foreign investor
Argentina	Central Pedro de Mendoza	Power Utility	90.0	8.5		Local investors
Argentina	Central Dock Sud	Power Utility	90.0	25.0		Local investors
Argentina	Central Puerto	Power Utility	60.0	92.2		foreign investor
Argentina	Central Guemes	Power Utility	60.0	86.2	\$10Mn cash, \$76.2Mn DES	Local/foreign investors
Argentina	Central Costanera	Power Utility	60.0	90.1		Local/foreign investors
Argentina	Edenor	Power Utility	51.0	427.9	\$30Mn cash, \$397.9Mn DES	foreign investors
Argentina	Central Alto Valle	Power Utility	90.0	22.1		Local/foreign investors
Argentina	Edelap (Area la Plata)	Power Utility	51.0	139.0	\$5Mn cash, \$134Mn DES	Local/foreign investors
Argentina	Edesur	Power Utility	51.0	511.0	\$30Mn cash, \$481Mn DES	Local/foreign investors
Argentina	Central San Nicolas	Power Utility	88.0	66.1	US\$10Mn in cash, US\$56.1 Mn DES	Local/foreign investors
Argentina	Centrales Termicas Patagonicas S.A.	Power Utility	51.0	5.2	US\$2Mn in cash, US\$3.2Mn DES	Local investors
Argentina	Centrales Termicas del Noroeste Argentino S.A.	Power Utility	90.0	15.2	US\$2Mn in cash, US\$13.2Mn DES	Local investors
Argentina	Centrales Termicas del Noreste Argentino S.A.	Power Utility	90.0	0.4		Local investor
Argentina	Central Hidroelectrica el Chocon (Hidronor)	Power Utility	59.0	223.9	US\$87Mn in cash, US\$136.9 Mn DES	Local/foreign investors
Argentina	Transener	Power Utility	65.0	234.1	US\$30Mn in cash, US\$204.1Mn DES	Local/foreign investors
Argentina	Central Hidroelectrica Cerros Colorados S.A. (Hidronor)	Power Utility	59.0	72.6	US\$27Mn in cash, US\$45.6 Mn DES	foreign investors
Argentina	Central Hidroelectrica Alicura S.A. (Hidronor)	Power Utility	59.0	178.0	US\$48 Mn in cash, US\$130 Mn DES	Local/foreign investors
Argentina	Hidroelectrica Piedra del Aguila (Hidronor)	Power Utility	59.0	272.1	US\$100Mn in cash, US\$172.1Mn DES	foreign investors
Argentina	Central Sorrento	Power Utility	90.0	8.8	\$5Mn cash, \$3.8Mn DES	Local investors
Argentina	Central Costanera S.A.	Power Utility	60.0	97.0	initial public offer	Local/foreign investors
Argentina	Transnoa	Power Utility	90.0	8.7	US\$2Mn in cash, US\$6.7Mn DES	Local investors
Argentina	Transnea	Power Utility	60.0	3.0	US\$1Mn cash+ US\$2Mn DES	Local investors
Argentina	Centrales Termicas del Litoral	Power Utility	90.0	0.5	Direct sale	Local investor
Argentina	Hidroelectrica Rio Hondo	Power Utility	98.0	4.1		Local investor
Argentina	Transpa	Power Utility	51.0	20.8	US\$1 Mn in cash, US\$19.8 Mn	Foreign/Local investors
Argentina	Centrales Termicas Mendoza	Power Utility	51.0	10.1	Direct sale; US\$2M cash+ US\$8.1M DES	Foreign/Local investors
Argentina	Distrocuyo	Power Utility	51.0	20.2	Direct sale	Foreign/Local investors
Argentina	Hidroelectrica Diamante	Power Utility	59.0	32.8	Direct sale; US\$4Mn cash; US\$28.8Mn DES	Foreign/Local investors
Argentina	Hidroelectrica Ameghino	Power Utility	59.0	14.2	Direct sale; US\$1.5M cash & US\$ 12.7M DES	
Argentina	Hidroelectrica Futaleufu, SA	Power Utility	51.0	226.0	Direct sale	Local investor
Argentina	Hidroelectrica Rio Juramento SA	Power Utility	98.0	41.1	30-year concession	
Argentina	Empresa Social de Buenos Aires (Eseba) (Transba)	Utility	na	220.0	Private sale	Local investor
Armenia	Yanadzor Ardivin elect. enterprise	Electricity	100.0	0.5	Sale of shares	Local investor
Belarus	Kohanovski ekskavatornoi zavod	Electricity	1.7	0.0	Employees buy-out	Local investor
Belize	Belize Electricity Ltd.	Power Utility	49.0	6.9	also received US\$10.753 Mn for debentures	Local investors
Belize	Belize Electricity Ltd.	Power Utility	49.0	14.2		Local investors
Bolivia	Empresa de Luz y Fuerza S.A.M.	Electricity	100.0	50.3	Auction	Foreign investor

Appendix C
Privatization Transactions By Country
(amounts in US\$ millions)

Country	Company	Sector	Share Sold (%)	Sale Amount	Financial Notes	Purchaser(s)
Bolivia	Campo Geotermico Laguna Colorada	Electricity	na	0.3		
Bolivia	Empresa Nacional de Electricidad	Power Utilities	50.0	104.8	Direct sale; all investment commitment	Foreign investor
Brazil	Centrais Eletricas do Para - Celpa	Electric Energy - Distribution Company	54.98% of the total stock	387.8	Auction	Local investors
Brazil	Empresa Bandeirante de Energia - EBE	Electric Energy - Distribution Company	74.88% of the voting stock	859.6	Auction	Local and foreign investors
Brazil	Companhia Energetica do Ceara - COELCE	Electric Energy - Distribution Company	82.69% of the voting stock	867.7	Auction	Local and foreign investors
Brazil	Elektro Eletricidade e Servicos S.A. - Elektro	Electric Energy - Distribution Company	46.6% of the total stock	1,273.6	Auction	Foreign investor
Brazil	Eletropaulo Metropolitana - Eletricidade de Sao Paulo S/A	Electric Energy - Distribution Company	74.88% of the voting stock	1,776.6	Auction	Local investor
Brazil	Serra Da Mesa Hydroelectric	Electricity	na	172.0	Auction	Local investors
Brazil	Light Servicos de Eletricidade	Electricity	59.8	2,390.7	Auction	Foreign/Local investors
Brazil	Companhia Energetica de Minas Gerais (CEMIG)	Electricity	na	156.0		
Brazil	Light	Electricity	na	237.6	Private sale	Local investor
Brazil	Centrais Elétricas de Minas Gerais - Cemig	Electricity	na	96.9	Sale of minority shareholdings	Local investors
Brazil	Companhia de Eletricidade do Estado do Rio De Janeiro - Cerj	Electricity	na	150.8	Sale of minority shareholdings	Local investors
Brazil	Eletricidade e Servicos S.A. (Elektro)	Electricity	na	215.9	Trade sale	
Brazil	Companhia energetica de Sao Paulo (Cesp)-Parapanema	Electricity	na	685.0	Trade sale	Foreign
Brazil	Companhia de Eletricidade do Estado da Bahia - Coelba	Electricity	na	183.9	Public Offer (Sale of minority shareholdings)	Local investors
Brazil	Companhia Paranaense de Energia -Copel	Electricity -Distribution Company	na	113.0	Sale of minority shareholdings	Local investors
Brazil	Companhia de Electricidade do Rio de Janeiro (CERJ)	Electricity distributor	70.3	587.5	Sealed bid	Foreign investor
Brazil	Copel	Electricity distributor	5.8	88.4	Auction	
Brazil	Centrais Geradoras do Sul do Brasil S/A - GERASUL	Electricity Services	na	79.0	Public Offer	Local investors
Brazil	Centrais Geradoras do Sul do Brasil S/A - GERASUL	Electricity Services	50.01% of voting stock	800.4	Auction	Foreign investors
Brazil	Manaus Energia S.A. - MANAUS	Electricity Services	na	na	Auction	Local investor
Brazil	Boa Vista Energia S.A.	Electricity Services	na	na		Local investor
Brazil	Cia Entrepotes e Armazens de Sao Paulo	Electricity Services	na	na		
Brazil	Centrais Electricas de Rondonia S.A	Electricity Services	na	na		
Brazil	Companhia Energetica do Piaui	Electricity Services	na	na		
Brazil	Companhia de Electricidade do Acre	Electricity Services	na	na		
Brazil	Comonhia Electrica do Rio Grande do Norte (Cosem)	Power	77.9	609.4	Bid	Local/foreign investors
Brazil	Cachoeira Dourada	Power	78.9	756.5	Auction	Foreign investor
Brazil	Companhia Energetica de Minas Gerais (CEMIG)	Power	32.9	1,060.0	Bid	Foreign investor
Brazil	Companhia Centro-Oeste de Distribuicao de Energia Eletrica (CCO)	Power	na	1,370.0	Bid	Foreign investor
Brazil	Companhia de Eletricidade de Bahia (COELBA)	Power	65.6	1,590.0	Private sale	Foreign investor
Brazil	Centrais Electricas Matogrossenses (CEMAT)	Power	86.9	352.7	Bid	Local investor
Brazil	Companhia Norte-Nordeste de Distribuicao de Energia Eletrica (CNN)	Power	na	1,490.0	Bid	Foreign/Local investors
Brazil	Companhia Paranaense de Energia (COPEL)	Power	8.3	89.6	Public offer	Various investor
Brazil	Companhia Paranaense de Energia (COPEL)	Power	15.0	459.7	Public offer,ADRs	Various investor
Brazil	Empresa Energetica de Sergipe (Energipe)	Power	86.4	526.3	Bid	Local investor
Brazil	Empresa Energetica de Mato Grosso do Sul (Enersul)	Power	55.4	564.5	Bid	Local investor
Brazil	Companhia Energetica de Brasilia (CEB)	Power distributor	18.4	73.6	Auction	Local investor
Brazil	Escelsa	Power Utility	50.0	387.4	Auction	Local investors
Brazil	Companhia Paulista de Forca e Luz (CPFL)	Power/ Electricity	57.6	2,730.0	Bid	Local investor
Brazil	ESCELSA	Utility	na	140.3	Auction	Local investor
Brazil	Celb	Electricity	83.7	45.5	Trade sale	
Brazil	Companhia Paranaense de Energia (COPEL)	Electricity	6.0	138.1	Trade sale	
Brazil	Cesp Tiete	Electricity	38.7	469.0	Trade sale	
Bulgaria	Power Engineering-Jambol JSC	Power engineering	90.0	0.1	Direct sale; debt-equity swap	Local investors
Bulgaria	Industrial Power Engineering	Power Engineering	75.8	0.2		Local investors
Bulgaria	Electrostroy-Haskovo	Power Engineering	85.8	0.4		Local investors
Bulgaria	Industrial Power Engineering - Veliko Tarnovo	Power Engineering	100.0	0.2		Local investors
Cape Verde	Electra	Electricity	51.0	47.9	Trade sale or competitive sale	Foreign

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(amounts in US\$ millions)

Country	Company	Sector	Share Sold (%)	Sale Amount	Financial Notes	Purchaser(s)
Chile	Central Termoelectrica (Tocopilla)	Energy	51.0	175.0	Direct sale	Local/foreign investors
Chile	Edelaysen S.A.	Power	91.0	43.0	Trade sale	Local investors
Chile	Pehuenche	Power Utility	70.0	90.0		Local investor
Chile	Edelnor	Power Utility	17.0	186.5		Local investors
Chile	Empresa Electrica de Aysen	Power Utility	6.7	39.4		Local investors
Chile	Empresa Electrica Colbun Machicura S.A.	Power Utility	5.0	21.0	Public offer	Local investors
Chile	Colbun	Power Utility	5.0	20.0	Direct sale	Local investors
Chile	Edelnor	Power Utility	30.0	86.4	Direct sale, public offer	Local investors
China	Shandong International Power Development Co Ltd	Electricity	na	57.9	Public offering	Foreign
China	Shandong International Power Development Co Ltd	Electricity	na	58.8	Public offering	Foreign
China	Shandong International Power Development Co Ltd	Electricity	na	405.4	Public offering	Foreign
China	Zhejiang Southeast Electric Company	Electricity/Power	35.9	239.0	B Shares and GDRs	Foreign investor
China	Heilongjiang Electric Power	Power	na	67.0	B Shares	Foreign investor
China	Beijing Datang Power Generation Company	Power	na	404.5	H Shares	Foreign investor
China	Huaneng Power International Inc.	Power	na	142.1	ADRs	Foreign investors
China	Northeast Electrical Transmission	Power Transmission	30.0	60.0	"H" share offering	Foreign investors
China	Huaneng Power International Inc.	Power Utility	25.0	625.0	ADR on NYSE	Foreign investors
China	Guangdong Electric Power	Power Utility	48.0	110.0	B shares, SZ	Foreign investor
Colombia	CORELCA	Electric distribution	65.0	\$518.1	Tender	Foreign investors
Colombia	Termocartagena	Energy	100.0	27.1	Public offer	
Colombia	Termotesajero	Energy	56.7	18.7	Public offer	
Colombia	Empresa de Energia de Bogota (EEB)	Power	48.5	2,181.0	Private sale	Foreign investor
Colombia	Empresas de Energia del Pacifico (EPSA)	Power/Energy	56.7	535.0	Private sale	Foreign investor
Cote d'Ivoire	SIDELAF	Electricity	45.2	1.0		Local investors
Cote d'Ivoire	CIE	Power	20.0	na	Concession	Local/foreign investors/foreign investors
Dominican Republic	East Distribution Company	Electricity	na	109.3	Trade sale	Local
Dominican Republic	North-South Distribution company	Electricity (distribution)	na	211.9	Trade sale	Foreign
Dominican Republic	Empresa Generadora Haina	Electricity (generation/distribution)	50.0	144.5	Trade sale	Foreign
Dominican Republic	Empresa Generadora Itabo	Electricity (generation/distribution)	50.0	177.7	Trade sale	Foreign
El Salvador	Compania de Luz Electrica de Santa Ana (CLESA) (formerly part of CEL)	Electricity	79.7	109.0	Direct sale	Foreign investor
El Salvador	Distribuidora de Electricidade del Sur (Del Sur) (formerly part of CEL)	Electricity	75.5	180.1	Direct sale	Foreign investor
El Salvador	Compania de Alumbrado Electrico de San Salvador (CAESS) and Empresa Electrica del Oriente (EEO) (formerly part of CEL)	Electricity	75% and 89% respectively	297.0	Direct sale	Foreign investor
El Salvador	Generadora Salvadorena/Generadora Acajutla	Electricity (generation)	na	125.0	Trade sale	Foreign
Estonia	AS Narva Elektrivõrk	Electricity	49.0	4.1	Auction	Local and foreign investors
Estonia	AS Läänemaa Elektrivõrk	Electricity	100.0	5.0	Auction	Foreign investor
Estonia	Narva Elektrivõrgud	Electricity	51.0	4.5	Trade sale	Foreign/Local
Estonia	RAS Volta	Power Utility	na	0.1	US\$0.1 million in investment	Local investor
Estonia	RE Energomontaa	Power Utility	100.0	0.1	US\$0.1 million in investment	Local investor
Gabon	Societe d' Energie et d' Eaux du Gabon (SEEG)	Power/ Water	49.0	na	Private sale	Local investor
Grenada	Grenada Electricity Services(Grenlec)	Power Utility	90.0	6.1	Direct + public; US\$5.56 Mn Cash+US\$1.48 Mn invest. commitment	Foreign/Local investors
Guatemala	Guatemalan Electric Company	Electricity	80.0	520.0	Direct sale	Foreign investors
Guatemala	Electrica de Occidente/Oriente	Electricity	80.0	101.2	Trade sale	Foreign
Guyana	Guyana Electricity Corp (GEC)	Electricity	50.0	23.5	Direct sale	Foreign investors
Guyana	Guyana Electricity Corp.	Power	50.0	22.0	Private sale	Foreign investor
Honduras	Energia Electrica Roatan (Enee-Roatan)	Power Utility	100.0	11.4		Local investor
Hungary	Észak-magyarországi Cramszolgáltató Rt.	Electricity	48.8	101.4	Tender	Foreign investor
Hungary	Dél-dunántúli Cramszolgáltató Rt.	Electricity	47.3	110.5	Tender	Foreign investor
Hungary	Tiszántúli Cramszolgáltató Rt.	Electricity	49.2	120.0	Tender	Foreign investors
Hungary	Dél-Magyarországi Cramszolgáltató Rt.	Electricity	47.9	154.4	Tender	Foreign investor
Hungary	Észak-dunántúli Cramszolgáltató Rt.	Electricity	47.6	194.2	Tender	Foreign investor
Hungary	Elektromos Muvek (Elmu)	Electricity	4.1	17.7		
Hungary	Eszakdunantuli Aramszolgáltato (Edasz)	Electricity	na	26.3		
Hungary	Eszak-magyarorszag Aramszolgáltato (Emasz)	Electricity	na	66.0	Trade sale	Local

Appendix C
Privatization Transactions By Country
(amounts in US\$ millions)

Country	Company	Sector	Share Sold (%)	Sale Amount	Financial Notes	Purchaser(s)
Hungary	ELMU Rt / Budapesti Elektomos Muvek	Electricity	na	745.7	Public offering	
Hungary	Reszvenytarsasag Bakonyi Erömu Rt.	Electricity, gas steam and water supply	15.0	na	Sale without tender	Local investor
Hungary	Bakonyi Erömu Rt.	Electricity, gas steam and water supply	15.0	na	For employees	Employees
Hungary	Bakonyi Erömu Rt.	Electricity, gas steam and water supply	0.0	na	On the basis of purchasing obligation	Local investor
Hungary	Budapesti Erömu Rt.	Electricity, gas steam and water supply	8.0	na	On the basis of purchasing obligation	Foreign investor
Hungary	Észak-magyarországi Áramszolgáltató Rt	Electricity, gas steam and water supply	7.0	na	Stock Exchange	Local investor
Hungary	Pécsi Erömu Rt.	Electricity, gas steam and water supply	17.0	na	Sale without tender	Local investor
Hungary	Pécsi Erömu Rt.	Electricity, gas steam and water supply	15.0	na	For employees	Employees
Hungary	Pécsi Erömu Rt.	Electricity, gas steam and water supply	0.0	na	On the basis of purchasing obligation	Local investor
Hungary	Országos Villamos Távfvezeték Rt.	Power	na	16.1		
Hungary	Paksi Atomerömu Rt.	Power	na	518.5		
Hungary	Mátrai Eröml RT.	Power	38.1	111.9	Tender	Foreign investor
Hungary	Dunamenti Eröml Rt.	Power	48.8	141.5	Tender	Foreign investors
Hungary	Budapesti Elektomos Muvek Rt	Power	46.2	235.8	Tender	Foreign Investor
Hungary	AES-Tisza Eröml Részvénytársaság	Power	na	87.5		
Hungary	Budapesti Elektomos Muvek Rt.	Power	na	9.0		
Hungary	Dél-dunántúli Cramszolgáltató Rt.	Power	na	13.2		
Hungary	Dél-Magyarországi Cramszolgáltató Rt.	Power	na	29.2		
Hungary	Mátrai Eröml RT.	Power	na	8.1		
Hungary	Tiszántúli Cramszolgáltató Rt	Power	na	25.1		
Hungary	Észak-dunántúli Cramszolgáltató Rt.	Power	na	35.9		
Hungary	Észak-magyarországi Cramszolgáltató Rt.	Power	na	17.0		
Hungary	Villanyszereleiopari Rt.	Power Utility	75.0	22.4		Foreign investor
India	Orissa Power Generation Corporation (OPGC)	Electricity	79.0	na	Direct sale	
India	Grid Corporation of Orissa (Gridco)- four power distributions	Electricity	51.0	37.0	Trade sale	Local
Kazakhstan	Karaganda	Energy	na	2.4		
Kazakhstan	Ekibastuz	Energy	na	2.0		
Kazakhstan	Almaty Power Consolidated	Energy	na	340.0		
Kazakhstan	Yermovskaya Power Plant	Energy	na	1.5		
Kazakhstan	4 Coal-fired and 2 Hydroelectric power plants	Power	na	25.0	Private sale	Local investor
Kazakhstan	Karazhanbasmunay	Power	94.6	na	Private sale	Foreign investor
Macedonia	Frinko	Electricity	100.0	0.2	Management buy-out	Local investor
Macedonia	RZ Skopje - CER	Electricity	100.0	0.0	Debt-equity conversion	Local investor
Macedonia	9 Maj	Electricity distributor	100.0	0.0	Management buy-out	Local investor
Macedonia	EMO	Electricity distributor	68.5	0.4	Debt-equity conversion	Local investor
Macedonia	RZ Skopje - Energetika	Power	100.0	0.0	Debt-equity conversion	Local investor
Malaysia	Sarawak Electricity Supply Corp	Electricity	50.0	424.1	sale of equity	Local investor
Malaysia	Tenaga Nasional Berhad	Power Utility	23.0	1,200.0	Public offer	Various investors
Malaysia	National Electricity Board	Power Utility/Electricity	na	11.0		
Malaysia	National Electricity Board	Power Utility/Electricity	22.8	268.6	Public offer	Various investors
Malaysia	Sesco	Power Utility/Electricity	45.0	293.4		Local investor
Mexico	Tereftalatos Mexicanos	Energy	42.2	106.0		Local investor
Mexico	Reactivos Minerales Mexicanos	Energy	100.0	0.3		foreign investor
Mozambique	Hidromoc-South	Utilities	100.0	0.1	restricted tender	Local investors
Nigeria	Electricity Meter Co. of Nigeria /Ltd.	Power Generation	7.7	0.5	Direct placement	
Pakistan	Kot Addu Power Company	Power	26.0	215.0	Auction	Foreign investor
Panama	Noreste	Electricity	51.0	89.9	Direct sale	Local investors
Panama	Chiriqui/Metro Oeste	Electricity	51.0	211.9	Direct sale	Foreign investors
Panama	Chiriqui/Bayano	Electricity	49.0	91.7	Trade sale	Foreign
Panama	Bahia Las Minas	Electricity	51.0	92.0	Trade sale	Foreign
Panama	Fortuna	Electricity (generation)	49.0	118.0	Trade sale	Foreign
Peru	Electro Norte S.A. / Electro Norte Medio S.A. / Electro Centro S.A./ and Electro Noreste S.A.	Electric Regional Distribution Company	30.0	145.6	Auction	Local investors
Peru	Empresa de Generacion Electrica Cahua	Electricity	60.0	41.8	Auction;\$8.36m (20%) down payment remaining over 8 years	Local investors
Peru	Edelnor	Electricity	na	10.8		Local investors
Peru	EDE Chancay	Electricity	60.0	10.4	Auction	Local investors
Peru	Luz del Sur	Electricity	na	170.7	Public offer	Local/Foreign investors
Peru	Empresa de Generacion Electrica del Norte (EGENOR)	Electricity	60.0	228.0	Direct sale	Foreign Investor
Peru	Empresa Electrica de Plura	Electricity	na	40.0		
Peru	Empresa de Distribucion Electrica de Canete	Electricity	na	3.5		
Peru	Electro Sur Medio S.A	Electricity	100.0	10.3	Bid	Local investor

Appendix C
Privatization Transactions By Country
(amounts in US\$ millions)

Country	Company	Sector	Share Sold (%)	Sale Amount	Financial Notes	Purchaser(s)
Peru	Talleres De Moyopampa S.A.	Electricity	74.1	27.0	Public offering of Acquisition Mechanism (OPA)	Local investor
Peru	Acc. Luz del Sur	Electricity	na	10.1	Sale of shares/Assets	Local
Peru	Acc. Wedegel	Electricity	na	24.3	Sale of shares/Assets	Local
Peru	Acc. Edegel	Electricity	na	30.9	Sale of shares/Assets	Local
Peru	Acc. Egenor	Electricity	30.0	60.0	Sale of shares/Assets	Foreign
Peru	Edelnor	Power Utility	60.0	176.5	Direct sale; investment commitment US\$150m	Foreign/Local investors
Peru	Edelsur	Power Utility	100.0	212.0	Direct sale; investment commitment US\$120m	Foreign investor
Peru	Edegel	Power Utility	60.0	524.5	Auction	Local/foreign investors/foreign investors
Philippines	Manila Electric Company (Meralco)	Electricity/ Energy	3.5	76.8	Block sale	Various investors
Philippines	Manila Electric Company	Power Utility	23.0	98.3	Public offer	Various investors
Philippines	Meralco	Power Utility	23.0	98.0	Public issue, 50/50 split assumed	Local/foreign investor
Philippines	The Energy Corp.	Power Utility	91.0	3.4		
Poland	Titaz/Dedasz	Electricity	na	19.9	Public offering	
Poland	Zespół Elektrociepłowni Pątnów-Adamów-Konin S.A. (PAK PPP)	Electricity	35.0	87.9	Trade sale	Local/foreign investors
Poland	Elektrociepownia Krakow SA (LEG Krakow)	Energy/Power	63.8	79.0	Trade sale/tender	Foreign investor
Poland	EL Polaniec	Power Utility	25.0		Tractabel	Foreign investor
Poland	EL Rybnik	Power Utility	50.0		EdF	Foreign investor
Poland	EC Warszawa	Power Utility	55.0		Vattenfall	Foreign investor
Poland	EL Skawina	Power Utility	35% to 50.1%	25.0	PSEG	Foreign investor
Poland	Kogeneracja Wrocław	Power Utility	-		Public offering	
Poland	ZEC Wybrzeże	Power Utility	45.0		EdF	Foreign investor
Poland	EC Białystok	Power Utility	45.0		Societe Nationale d'Electricite	Foreign investor
Poland	EC Bedzin	Power Utility	35.0		Sale + Public Tender	Foreign investor
Russian Federation	Mosenergo	Electricity	na	22.5	ADRs	
Russian Federation	UES	Electricity	8.5	330.0		
Senegal	Société nationale sénégalaise d'électricité (SENELEC)	Electricity	34.0	65.3	Competitive sale of shares including tenders	Foreign investor
Senegal	Societe Nationale d'Electricite (SENELEC)	Electricity	33.3	69.0	Trade sale or competitive sale	Foreign
Slovak Republic	Elektrovod Zilina	Energy utility	54.0	3.9	Sale of shares	Local investor
Thailand	Electricity Generating Public Co. (EGCO)	Energy	7.4	238.9	Public offer	Various investors
Thailand	Electricity Generating Company (Egcomp)	Power generation	14.9	241.0	Direct sale	Foreign investor
Thailand	Electricity Generating Public Co., Ltd.	Power Utility	51.0	180.0	Public offer, 28% foreign	Local/Foreign investors
Trinidad and Tobago	Trinidad & Tobago Electricity	Power Utility	49.0	107.5	Direct sale	Foreign investor
Turkey	Abana	Electrical	na	0.3	Public offer	Local investor
Turkey	Kepez Elektrik	Power Utility	0.1	0.1		Local investors
Turkey	Cukurova Elektrik	Power Utility	2.0	7.6		Local investors
Turkey	Kepez Elektrik	Power Utility	8.1	9.4	Public offer	Local investors
Turkey	Cukurova Elektrik	Power Utility	8.1	38.8	Public offer	Local investors
Turkey	Kepez Elektrik	Power Utility	0.7	1.0		Local investor
Turkey	Cukurova Elektrik	Power Utility	1.5	8.6		Local investor
Turkey	Kepez Elektrik	Power Utility	0.3	0.4		Local investor
Turkey	Cukurova Elektrik	Power Utility	0.2	1.0		Local investor
Turkey	Cukurova Elektrik	Power Utility	11.3	81.1	Direct sale	Local investor
Turkey	Kepez Elektrik	Power Utility	25.4	33.2	Direct sale	Local investor
Turkey	AEG - ETI	Power Utility	11.1	2.2		Foreign investor
Turkey	Altec	Power Utility	30.0	0.6	Direct sale	Local investors
Turkey	Cestas	Power Utility	2.3	0.0	Direct sale	Local investors
Venezuela	Sistema Electrico de Isla de Margarita	Electricity	70.0	90.0	Direct sale	Local and foreign investors
Zambia	Nueva Esparta (SENE) Power Division of ZCCM	Power	na	na	Private sale	Local investor